



Welcome to Pacific Vetcare Equine Surgery

Artificial Insemination (AI) Information Handout

What is artificial insemination (AI)?

Artificial insemination (AI) is the placement of semen into the uterus using a catheter inserted through the cervix.

What does it involve?

To ensure expert care and attention your mare will need to be boarded at the Equine Reproduction Unit (ERU) at Bonville for five days. The ERU is a purpose built facility located on a small acreage property owned and managed by our veterinarian Dr Merrilyn Fitzgerald. During your mare's stay she will be individually housed in a small post and rail paddock.

You will need to supply all feed and rugs, however Dr Fitzgerald who resides on the property will do all the feeding, watering and rugging. During the five days the mares will be scanned daily until they begin approaching ovulation at which time they will be scanned at much closer intervals until it is time to inseminate. Hormones are normally given to the mare to ensure she ovulates.

The mare will need to be re-scanned at 14-16 days following insemination to see if she has fallen pregnant (unfortunately the mare will not be able to stay at the property at Bonville for the 15 days following insemination purely due to the limited number of yards available). If a mare is confirmed to be pregnant she will be ultra-sounded again at about 45 days to confirm that the pregnancy has become well established.

Why use AI over natural service?

Advantages

1. Increases availability of stallions nationally and internationally.
2. Increases availability of genetically superior stallions.
3. Allows the use of stallions that are deceased or that are only collected during the off season (i.e. winter).
4. The cost of shipping semen is less than the costs involved to transport the mare to and from the stud.
5. Allows you peace of mind knowing your mare is close to home. The period of time in which she is away from home is also significantly reduced.

Disadvantages

1. Fertility statistics are lower than with natural coverage or AI involving the use of fresh semen. On average, fertility of frozen semen is approximately half that of fresh semen.
2. The semen from some stallions is unsuitable for cooling or freezing.
3. The process by which the semen is frozen will have repercussions on the quality of the semen, thus freezing should take place at a specialized facility.

What methods of AI are we offering?

- Fresh-chilled semen: This is semen diluted with an extender (solution added to preserve the sperm) and then cooled slowly to -6°C in a cooling container. The semen is then transported in this cooling container. The preferred container is an "Equitainer", however if this type is not available a number of polystyrene containers are available which will carry out the same job. Chilled semen must be used within 24 hours of collection; hence this limits the use of chilled semen to stallions located in Australia and New Zealand.
- Frozen semen – this is semen that is frozen immediately following collection. It is then stored in liquid nitrogen until required for use.

Unfortunately will not be able to inseminate mares with foals at foot this season but we aim to be set up for that from next year.

What fertility rates should I expect when using chilled or frozen semen?

- Chilled semen: 60%-70% as it does not undergo the freezing process. On average it will take one to two cycles to get a mare pregnant
- Frozen semen: Frozen semen has approximately half the fertility of fresh semen, thus average fertility is 35-40% per cycle. This means it can take numerous cycles to get a positive result.

At what time of the year can I think about breeding my mare by AI?

Horses are seasonally polyestrous. This means they cycle a number of times during one particular time of the year, in Australia this time of year lies between the months of October and March. The increase in day length we receive during early spring stimulates cyclic activity. Mares tend to ovulate at 21 day intervals. The first few cycles in early spring are in a 'transition phase' as the mare moves out of her winter ovarian inactivity. During this time the mare will show signs of oestrus behaviour (such as frequent urination, clitoral "winking", submission to the stallion etc) however she will not ovulate. The 'transition phase' can last up to 2 months. Due to this we are recommending that all mares must lose their winter coats before being considered for the AI program in an attempt to prevent wasting your time and ours with mares that aren't quite ready to be bred.

Is my mare suitable?

There are a number of factors that you need to consider when deciding if your mare is suitable to be bred using AI:

1. Her age? Mares over 20 are generally unsuitable (the younger the mare the better).
2. Reproductive status? Maiden mares are the most fertile, and then mares with foals at foot followed by mares who have been dry for at least one season.

3. Has the mare had previous fertility problems?
4. Is the mare suffering from any anatomical abnormalities that will affect her ability to fall pregnant? (We will be able to help you out here if you are unsure).
5. Has the mare suffered from complications during a previous foaling?
6. Has the mare ever aborted?

We can help you to decide if your mare is suitable and reserve the right not to inseminate mares that are poor candidates.

If your mare is suitable you then need to consider:

1. Is her tetanus up to date? If she hasn't been given a booster in the last 2 years she will require a tetanus toxoid injection. If she has never been vaccinated she will need to be given tetanus antitoxin and tetanus toxoid injections followed by a second tetanus toxoid injection 3-6 weeks later.
2. Is her worming up to date?
3. Is she of an adequate body condition? Ideally broodmares should be slightly above average body condition and on a rising plane of nutrition. If the mare's diet is comprised of pasture only we advise that you begin supplementing with Lucerne hay and/or a hard feed at least a month prior to when she is due to be bred. When introducing new feed it is important to do this slowly over a period of a week, gradually increasing the quantity offered each day.

What questions should I ask the stallion owner or manager before deciding if he is the most appropriate stallion to use?

1. When talking stallion fertility with stallion managers or owners it is important to ascertain if these statistics are based on pregnancy rates per cycle or are they based on an overall pregnancy rate for the season. If statistics are based on pregnancy rates per season this gives you no accurate indication of the stallions true fertility as there is no way to know how many inseminations were needed to get that result.
2. Has the stallion been collected or served a mare this season? The first ejaculation of the season will always contain an ejaculate of lower quality.
3. Has the stallion got foals on the ground?
4. When buying frozen straws how many do you receive? If this is a limited number i.e. if you are sent 3-4 straws can you get more straws if the mare fails to fall pregnant within the 3-4 inseminations?
5. When buying chilled semen will they continue to keep sending you semen if the mare fails to fall pregnant?
6. What are the conditions of payment: Is payment required after a 45 day scan, do they offer a live foal guarantee? How much does it cost for additional collections etc.
7. Do you need to send the semen shipper back to the stud or their vet? How much will that cost?

What does it cost?

For a comprehensive quote please contact Dr Merrilyn Fitzgerald on 0418 964 321 or Pacific Vetcare on 02 6652 3455.

Why is AI using frozen semen more expensive than chilled?

AI using frozen semen needs to be timed very accurately to within 6 hours prior to ovulation and to a maximum of 6 hours after ovulation, meaning more scans are required to ensure that ovulation is not missed. Also the semen needs to be deposited as close to the oviduct of the ovulating ovary as possible due to the very small volumes of semen in each straw. This procedure is more technically demanding and requires specialized equipment.

When will payment be required?

Payment in full will be required once the insemination has been completed and before the 14-16 day pregnancy test .You will be given an invoice at the time you pick your mare up and payment can be made at any of the Pacific Vetcare clinics or over the phone with credit card.

What do I do next?

If you are interested in getting your mare inseminated this season you need to contact Dr Merrilyn Fitzgerald at Pacific Vetcare, Coffs Harbour 02 6652 3455 or on her mobile 0418 964 321.

Spaces will be limited so register any expressions of interests early. Mares will be taken from September onwards. It is your responsibility to find a suitable stallion but frozen semen can be stored for a monthly charge. Stallions can be sourced through breed associations, stallion directories or through web sites such as www.selectbreeders.com