



# The Ups and Downs of Breeding with a Stallion

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**B**reeding your own horses is an option that many horse owners try at some stage. Most owners have a mare they breed from, however very few owners decide to manage and educate a stallion with the prospect of using him as a breeding proposition.

Stallions might be considered a breeding option to increase genetic gain, financial gain or prestige. Stallions are 50% of the genetic equation and as such are an important factor. This article answers some of the questions associated with using stallions for breeding.

## Why do people choose to collect a stallion rather than simply use a natural cover?

Stallions can be used for live cover/natural mating or can have their semen collected for artificial breeding. This artificial breeding can be for fresh, chilled or frozen semen known as artificial insemination (AI). The amount of processing varies but generally increases from fresh AI to frozen AI. Fresh AI is for relatively immediate use. Chilled AI is for transporting semen for up to 48 hours. Frozen semen is to preserve semen indefinitely and allow transport (especially internationally) or for long term storage.

There are several reasons why stallions are not used for live cover. These vary depending on the wishes of the owner and distance is often a major contributing factor.

**Fresh AI** can be used when the stallion has too many mares to cover that day, or it is more convenient for the stallion owner to collect once and inseminate several mares. Fresh AI is useful when the mare is not co-operative even though she looks to be at the correct stage of behavioural oestrus. An uncooperative mare can be anxious, frightened or even aggressive if they are not managed correctly. As an uncooperative mare may be a danger to the stallion, people and herself, a decision made by the stallion and/or the mare owner to collect the stallion and use fresh AI in the mare to save potential heartache.

**Chilled AI** allows semen to be transported from the stallion to the mare in a 24 to 48 hour period. This might occur where the mare owner cannot or will not transport the mare to the stallion and wants the option of having their mare inseminated at a facility of their choice. Also stallion owners that are not in a position to handle mares might opt to drive the stallion to a facility to have semen collected, assessed, processed and transported to the mare. This works well

for stallions in a performance career for several reasons. The stallion owner can concentrate on the performance training/competing and the stallion can focus at home on training so that the stallion only associates breeding behaviour with the breeding/collecting facility.

**Frozen AI** or the collection of semen for frozen storage is done for multiple reasons. This allows long term storage of semen. Some owners use this as an insurance policy to ensure semen is stored in case the stallion is no longer able to breed. Some owners look to export semen and frozen storage is the most convenient method but requires semen to be collected in an approved facility with quarantine and health testing performed. Some semen is collected and stored in anticipation that a young colt or stallion might show some promise, the owner will store some frozen semen and then have the colt/stallion gelded.

## How is semen collected?

The most common way to collect semen is to have the stallion mount either a mare or a dummy. The semen is collected, assessed, processed and then later inseminated.

There are other ways to collect semen. Some horses can be trained to collect on the ground. This can be used for an older stallion that might have hind limb pain that prevents him from mounting. Alternatively chemically induced ejaculation can be used in selected cases.

## How many people does it take to collect semen?

It is possible with a very well trained stallion and personnel to have one person handling and collecting the stallion. This is the exception and it is much safer to have a dedicated stallion handler, a dedicated mare handler and then the person collecting the semen, a total of three people.

## Is there an optimum reproductive age for the stallion?

Stallions all mature at different rates and different ages. There can also be some breed differences. Most stallions start puberty between 1 to 2 years of age depending on when they are born. Final maturation is usually about 4yrs of age. It is possible with over use of a young stallion, or the use of some drugs to reduce fertility. It is essential to carefully manage a young stallion that is breeding so that no damage is done to his fertility.

## Does the stallion need to be sound?

Soundness generally refers to the horse not being lame. A mature stallion with a large breeding commitment needs to be fit and strong for the season. Any soreness can become a problem with the stallion potentially refusing to mount due to pain. Also the quality and amount of semen can be less with a horse that is in pain. The last point about soundness is an ethical dilemma. The physical appearance of a horse (conformation) is important in determining whether there are likely to be problems with soundness. The physical appearance is also passed on to the offspring and so offspring can inherit the physical appearance of their parents and inherit some of the problems that may go with that physical appearance.

## What are the various methods of inseminating a mare?

There are several methods to inseminate a mare. The general principles are cleanliness and no trauma. With a large volume of semen the method is to use an insemination pipette to place the semen in the body of the uterus. With smaller semen doses, the ideal is to place the semen further up the uterus closer to the ovary.

## What are the pros and cons of these methods?

Large volume insemination is relatively easy and cheap. The more involved inseminations with low semen doses can be more involved and expensive as they might require drugs and equipment to achieve insemination.

## How long does semen last in the various types of storage?

Fresh semen should be used within a few hours. Chilled semen can last 24 to 72 hours depending on the stallion and the way it is processed. Generally it should be used within 24 hours. Frozen semen can last indefinitely, if it is looked after properly.

## How do I ascertain if my stallion's semen is viable and/or decent quality?

This can be very important for a number of reasons. If you are considering purchasing a stallion as a breeding prospect then evaluating the fertility of the horse is very important. Also if you want to have an idea of how many mares can be booked into a stallion for the season then an evaluation is important. If you are considering using chilled semen, there are a number of different extenders and processing methods. Having a test run of different methods will work out which one is the best and that way a quality product can be delivered to the mare owner. It is possible that a stallion's semen might not chill or freeze well. This is important to know before offering the stallion for those services.

## How do you assess the quality of the semen?

Semen is assessed by visual characteristics, volume, concentration and mobility. Some of these can be done by eye, the rest need microscope and associated slides. It is also possible to use computer aided sperm analysis (CASA). Although CASA is not essential, it does allow some degree of objectivity and repeatability, all important for producing good consistent results.

## Do stallions need to stay at a reproduction facility? If so, for how long?

Not necessarily. Some clients prefer to bring them in for collections when they are required. Other clients prefer to leave stallions at a collection facility. The first option reduces costs associated with agistment but put a burden on the owners to make the stallion available on request. The second option removes the need for the owner to drop everything and run the stallion to the reproduction facility but the work load needs to be considered so that the agistment bill does not exceed income from services.

## When is the best time of the year to collect and freeze stallion semen?

Stallions can be collected any time of the year to freeze semen. Freezing semen is more time involved and out of season there is generally more time. Also some horses that have frozen semen collected need to be trained for this process. It is nicer to work with a naive stallion when everything is quiet and there is no time pressure, that can occur during the breeding season. If semen is being collected and frozen for export then the facilities and animals have to meet strict quarantine standards. The necessary quarantine isolation of the stallion might be easier to achieve without the heavy traffic flow that occurs during the breeding season.

## What factors reduce the performance of the stallion and the quality of the semen?

The main factors that affect quality are age, pain and the use of drugs that impair fertility. A very young horse might not have good quality semen until he reaches maturity. From 14 years of age semen quality deteriorates. This is very individual and some older stallions have very good semen quality, others deteriorate at a relatively young age. The use of drugs and supplements in performance is common. Some of these will affect fertility, especially in a maturing individual. If you are unsure of the effect of a drug on a stallion's potential fertility, consult your veterinarian.


## I would like to breed from my mare. How do I start the process and where do I find a suitable stallion?

Stallion selection can be very difficult and depends on the desired end product. Having a working knowledge of popular or performing stallions in your discipline and their bloodlines will help you make a decision. There will always be someone nearby who will have an opinion and separating the wheat from the chaff can be difficult.

Once stallion/s selection has been achieved, budget is a consideration and research into the entire costing of breeding including service fee, agistment and veterinary fees is important. These will vary depending on the type of breeding that is done. Research into fertility results with your selected stallion might be difficult to obtain but some stallion owners are very open about what they think their stallion fertility results are.

Having your mare examined by a Veterinarian is important. Ideally this should be done before or early in the season so that the Veterinarian can identify any obvious problems and possibly correct them before too much time is lost.

## Is there any post repro season veterinary care that I need to consider?

Most mares have uneventful pregnancies and births. If there is a history of problems with your mare then discussion with your veterinarian can help come up with a management plan for pregnancy. Overall, keeping these mares in good to fat condition (not obese) produces the best foal possible with very little problems. 

At WestVETS, we have the expertise and facilities required to successfully assist breeding your horses. We also have several stallions standing at stud. Check our website for more information and we can further answer your queries - phone us on (07) 5464 4422.

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