An Introduction to Basic Handling for Foals

Feb 16

Caz (pictured) is comfortable with human contact - so much so that she doesn't even bother to move herself into a less vulnerable position.

The handling of foals is something that attracts a little controversy - some people like to leave them until they are ready to break in, others prefer to get right in there and imprint train, handling them regularly from the second they hit the ground. At Rosehill Sporthorses, I prefer to handle foals regularly, including teaching them to be touched all over, wear a halter, have their feet picked-up and trimmed, and be led. Lessons are established and repeated, with the foals coming in to the yards daily for the first few months of life in order to establish those key lessons and set the ground rules.

Our demo foals for this article will be Cadenza RH ('Caz') and Silhouette RH ('Vienna'). Caz was born on the 21st, and Vienna is roughly 2 weeks old. Both have been handled regularly from birth, so are relatively comfortable with human contact – it is important that the youngster is comfortable around people before the teaching begins. Stressed animals learn more slowly and will panic more readily – a relaxed, confident foal will absorb more of each lesson than will a frightened or uncomfortable foal.
Foal Behaviour and Mentality

Just as children are individuals, foals vary in character as well. Some are very nervous and shy, and take a long time to come around and accept humans as a part of life without wariness. Others are confident from the get-go, and remain that way throughout their education. It is important to keep these differences in mind when handling foals. A considered approach is important, and treating each one as an individual is necessary when starting foals’ early educations. This early contact with humans will leave a lasting impression on the young animal, so it is important that it is done correctly.

Foals are by nature playful. It is important that all learning at this stage in life is done playfully and with as little stress as possible - the foal should enjoy human interaction.

One thing to note with the handling of youngsters is that everything must be done in a playful manner. Although the schooling of a more mature animal can be done a little more seriously, horses this young are very playful, have short attention spans and are easily exhausted mentally. With this in mind, I like to keep my lessons with horses of this age very short – maximum 15 minutes, and usually less, with plenty of scratch breaks in between. Foals are also very dependent upon their mothers, so it is important that the foal never feels it is being more separated from its mother than it is comfortable with – this would stress both the mare and the foal. A quiet sensible mare can have an amazing reassuring effect on the foal – the foal looks to its mother to decide how it should behave. If the mare is quiet, confident and relaxed around people, chances are the foal will become confident and comfortable given a little time. On the other hand, a nervous and difficult mare can transmit these concerns onto her young, creating stress where it isn’t needed and making the handling process more difficult. (This is something to bear in mind when selecting a mare to breed from.)

When to Start What?
Vienna has learned that people are no threat, thanks to our patience and her mother's friendly outgoing nature - a minute after this shot was taken she left her mother to come say hi!

Provided the mare is sensible and cooperative (and so far I haven’t had one be anything but sensible and cooperative), you can begin getting the foal accustomed to human contact as early as you like. I try to have minimal contact during and immediately after the foaling, in order to allow the mare and foal to bond without too much disturbance. Provided the delivery goes smoothly, I sneak over while the foal is still tying down, disinfect the navel with iodine spray, give the foal a quick once-over with my hands, then leave mother and baby to become acquainted. Within a few hours, I have the vet come up to check the mare and foal over (just as a precautionary measure).

Leading is left until the foal is at least 3 weeks old. Many people believe that leading should be left until later because of the relative fragility of the foal’s musculoskeletal system at an early age. It is my opinion that, if done correctly, leading need not put excessive strain on the foal’s body. Tying should be left to a later date, as there is little ‘give’ in the rope should the foal set hard against it (whereas when you are leading the foal you can give and take as much as necessary); however, some introductions to tying are also introduced as soon as the foal learns to give to pressure on the halter.

To Come...

In future articles, we will cover key topics about foal handling, and outline the methods we use for handling our youngstock. It must be borne in mind that there is no one ‘right’ way, and every foal is different so each will require a slightly different approach. We will cover key areas such as leading, grooming, picking up feet, desensitizing, and introducing the concept of tying to the young foal.
"Cuddles?" - Vienna being social
Horse Psychology Explained

Feb 1

Ever wondered why your horse reacts seemingly illogically to things? Have you ever
watched them in the paddock together? There are distinct differences in the ways that horses communicate and perceive the world to how humans do. This often leads to misunderstandings and associated problems between horses and their handlers. Read on to gain an insight into what your horse is really thinking!

**Predator versus Prey Thinking**

These two mares have reacted to something they have seen or heard. Fear leads to the flight reaction - a typical prey animal response.

Unlike humans or dogs, horses are not a predatory specie – they are animals of prey. Horses, like other prey animals such as deer or cattle, are constantly on the lookout for predators. Their focus must remain broad in order to identify any threat coming from any direction. Vigilance is their strong point – they are reactive to their environment, as opposed to proactive to it. Predatory animals, on the other hand, have an ability to focus in on a target or task, plan a strategy to achieve a goal, and block out whatever is going on around – ‘tunnel vision’, more or less. Predators ‘plan’ a way to take down prey, while the prey remain as vigilant as possible in order to detect a threat in time to get away safely. We think and focus very differently from how horses do, so much adjust our training methods in order to take this into account. Our approach varies so much from that of a horse that we often identify ourselves as a threat in the minds of horses, just in the way that we approach them.

**Flight versus Fight**
Significant to the predator-prey aspect of horse psychology is that of flight versus fight. Horses, like other prey animals, rely on their flight mechanism in order to escape a threat – they will only fight if given no other option. Predators (such as humans), on the other hand, will be more likely to engage into a fight when confronted. This has much bearing upon how horses react in training. While we seek to often negate the flight instinct, it is impossible to completely erase.

Gaining Dominance

The two tendencies of predator and prey animals can also be seen in how they establish dominance among themselves, within their own social groups. Watching two dogs fighting for dominance, you can see that the aim of one dog is to get the other in a vulnerable position and hold them there – for instance, have the other dog submit by lying on its back and exposing its belly, remaining motionless. In humans, it is similar – when people wrestle or fight, there is always a desire to restrict that person’s movement and hold them still until they ‘give’ and admit defeat. Horses are different in this way – if you watch a group of strange horses becoming acquainted, you will notice the amount of movement generated by those more dominant animals – in horses, dominance is expressed through making another animal move. This sharp contrast to how we are wired to behave can lead to misunderstandings in training.

This chestnut yearling is showing his younger sister who is boss! By biting and chasing her,
Implications when training

Having now gone through some of the basic differences between horse and human psychology, one can come to a few conclusions:

1) The horse is a reactive animal, not a proactive one. The horse reacts to his environment and learns from it, but does not plot or plan – as a grazing animal, he is not wired to do so; therefore, your horse is not in a mental frame to plan to make your life a misery. What you train into a horse, and how his environment causes him to react, will determine how he performs. The horse is a product of his environment, as he does not ‘think’ in a way that allows himself to plan out a course of action to the extent that we do.

This month-old filly has experienced nothing harmful from humans during the time she has been alive, so she allows me to come over while she is in a very vulnerable position - her experiences have dictated to her that I am not a threat.

Training and what he is exposed to in his life will determine how he goes in training (putting aside physical ability, of course). If your horse has had constant harassment under saddle all his life, he will be tense under saddle. If your horse has been in pain, or excessively stressed, every time he has had a bridle on, he will be difficult to bit. Horses, however, will not plot to be naughty just for the sake of it. Before blaming the horse, review what he could be reacting to and why – often times, the environment or the training are just cause for his behaviour.

2) The horse is a flight animal, and will attempt to flee from stressful situations unless given no option but to fight. Misunderstandings can occur when the animal attempts to flee from an object or situation he finds frightening, against the rider or handler’s wishes. (At times, the handler himself can be the situation, if the animal fears him/her.) The horse is generally not being naughty, but is rather reacting to his instinct, which is to remove himself as quickly as possible from the potentially threatening situation – he has nothing to lose in getting out of there, and has everything to lose should he ignore his first instinct to run and stick around! By punishing the animal for his attempt to flee from something that terrifies him (and thereby
engaging in fighting behaviour in his mind), you are confirming his greatest fear. Not only are you preventing him from escaping the terrifying situation or object, but in telling him off for something he will not understand as a disobedience (he was just ‘reacting’ by instinct) and becoming directly confrontational without moving him forward but simply punishing him, you are taking on the persona of the predator he most likely thought he saw in that bush. Things will only get worse and more tense. The solution is to be the leader that the horse wants. If you are the dominant ‘horse’ in the relationship, your horse will, to some degree, look to you when something worries him.

Horses naturally avoid confrontation. Here, we can see that the chestnut has nipped the bay filly. Her natural and immediate reaction is to move away rather than bite back.

By becoming stressed and confrontational, you are also sending out the message that there really is something to fear, then not allowing him to escape it. A pat on the shoulder, a calming voice and continuing on as if nothing has happened as much as possible is the best way to deal with a genuinely worried animal.

3) In dominating a horse, the trick is not to tie him to a post and keep him still, but rather in moving him around. A disrespectful horse will walk into your space and quite happily push you over. By moving your feet, the horse has gained a little dominance over you, and lost a little respect for you. Allowed to continue, the horse will gain the upper hand. Similarly, a horse that does not allow you to move him around (backwards, forwards, sideways, either on the ground or under saddle) does not respect your authority – he does not respect you enough to move out of your space. It is important that these boundaries are established. Unlike predators such as humans, horses dominate with forward movement. Hence one must keep this in mind when working on trying to gain a horse’s respect – by ‘holding them still’ you are doing nothing for yourself. It is in moving their feet to where you want them that true respect come into play.

Of course, these points do not justify disobedience or naughtiness on the part of the horse! Disobedience must be met with fair and consistent punishment, and training must carry on while submitting the horse to stress of some degree (for instance, the first time he has a saddle on, or is learning a new exercise or movement); but may the above points serve as a reminder of what the horse is and is not – he is a prey animal, who reacts rather than plots;
he is a flight animal, who will run from a fight whenever he can; and he is a herd animal who
will increase the size of his space and move others out of it in order to become dominant. If
we can keep these three key points in mind, we can answer many of our own questions
during training, and understand why our horses react the way they do.

A scratch never hurts either! This young gelding has grown into a well-adjusted, respectful
two-year-old and has since been moved on to a new home to begin an eventing career

A Brief History of Trakehner Breeding

Posted in Training and Schooling
Tagged behaviour, dressage, equestrian, eventing, foal, gallop, horse, horse behaviour, horse riding, horse training, jumping, predator, prey, resistance, schooling, shying, sporthorses, Thoroughbred, training, warmblood, young horse

A Brief History of Trakehner Breeding

jan 17
Cadenza RH, black Hanoverian x Trakehner filly by Conbrio (Contucci - Anamour), out of Range View Lavinia - here demonstrating the lightness and ease of movement typical of the Trakehner breed

The Trakehner breed is one of the oldest breeds of Warmblood. Incredibly refined and elegant, the Trakehner is easily distinguishable from other Warmblood breeds. One of the distinguishing features of this breed is its light, springy movement and ability as an all-round athlete.

The Thoroughbred, Arab and Anglo Influence

The Trakehner studbook is a closed studbook – only the outside influences of Arabian and Thoroughbred blood may be added to the studbook – in order to preserve the breed type, stallions of other Warmblood breeds are not allowed into the Trakehner studbook (though Trakehner blood has long been used in the development and refinement of other Warmblood breeds, as with the addition of the Abglanz line into Hanoverian breeding, for instance). Arab and Thoroughbred blood was used in the development of the Trakehner breed, therefore it can be said that the addition of these breeds maintains the purity of the Trakehner studbook.
The Thoroughbred (left) and Trakehner (right) mares above both have the potential to carry on the development of the Trakehner breed in New Zealand. The Thoroughbred was and still is used to develop the breed and widen the gene pool.

In 1937, Count von Lehndorff examined the blood composition of Prussian Warmblood breeding stallions. It was noted that, since 1819, all the stallions from the breeding areas of East Prussia, Hannover, Holstein, Oldenburg and Ostfriesland date back to a collection of 74 foundation sires. The composition of breeds among these horses is an indication of how the breed developed – 62 of these foundation sires were Thoroughbreds, 7 were Arab/Anglo-Arab and only 2 were ‘halfbred’ stallions. This gives one an indication of the influence of the Thoroughbred in the development of Warmblood breeds across Europe. Studies show that the influence of the Thoroughbred had the effect of reducing bone, reducing girth depth, reduction of girth circumference, a general reduction in size and a reduction in bodyweight.

The Trakehner breed in particular has been significantly influenced by the Thoroughbred – more so than any other breed of Warmblood. Originally, the Arabian had huge influence, but the Thoroughbred gained more in the 19th century due to the ability to test its performance (racing), its better paces, larger size and better overall conformation for performance. In looking at the development of the early Trakehner in East Prussia, one notices that the Main Stud focused all desirable traits and culled out the undesirable ones by making only selected Thoroughbred sons available to provincial breeders. This selection of Thoroughbred stock based on quality resulted in a horse of much higher caliber, with sought-after traits being passed on down the generations.
The Trakehner breed was primarily founded by three stallions: Impuls, Pregel and Maharadscha, largely through his son Flaneur. These stallions account for the larger stallion lines that dominate the breed today – their names are present in the pedigree of many of today's Trakehner stallions. In order to broaden the gene pool and avoid inbreeding, more Arab, but predominantly more Thoroughbred, blood had to be added. This led to the introduction of 7 of the key stallions that led to today's modern day Trakehner – the next step in the development of the breed. The stallions Synders, Sahama, The Duke of Edinburgh, Marsworth, Friponnier, Hector and Perfectionist; and directly after the period of World War I the stallions Paradox and Lehnsherr.
light-boned elegant and highly refined type of horse, one which was hardly distinguishable from the Thoroughbreds that had created such an influence on the Trakehner horse. Through World War I, these lighter framed horses were used as light army mounts, but at the conclusion of the war these lighter-boned animals lacked the substance and the brain for the farm work they had been originally developed for. The State Stud director at the time went for a method of ‘strengthening from within the breed’, by using as strengthening stock the progeny of one Thoroughbred stallion who had already shown a suitability for breeding Warmblood horses. In order to meet these breeding goals, the a new line of stallions gained influence, including Tempelhuter, Jagdheld, Irrlehrer and Pirat (a grandson of Perfectionist).

The change in breeding goals in 1930, from a light cavalry-bred animal used in the light forces to a riding horse that could also perform other duties, resulted in a drop in the number of mares covered by Thoroughbred and Arabian stallions; however, the numbers were quickly increased again in 1938 in order to recreate the lighter-built animal required for remounts for World War II.

![Prince Rouge xx](image)

After World War II, the introduction of certain Thoroughbred stallions, primarily the likes of Stern, Traumgeist, Prince Rouge, Pasteur, Swazi, Maigraf and Kreuzritter, were used with good effect. Stern was a controversial stallion but one that showed great strengthening ability for the breed; Traumgeist had an excellent temperament, superior balance and cadence and showed many of the qualities desired of a riding horse; Prince Rouge was particularly famed for his jumping ability – horses with Prince Rouge in their pedigree are highly sought-after even today – as well as his super exterior and good movement; Pasteur had good movement and an excellent outline, and passed on rideability, size, movement and an excellent temperament; and Swazi showed strength, solidity, a large frame, three superb paces and a great temperament.

**The Breed Today**

The Trakehner breed today does not currently contain high amounts of Thoroughbred or Arabian blood. In order to widen the gene pool and continue to improve the quality and conformation of the breed and improve performance factors, the Thoroughbred is preferred.
over Arab blood – due to the added performance factor, larger frame, cleaner shoulder and more correct conformation. Today, the influence of the Thoroughbred and Arab in the breed’s history is obvious in the horse’s elegance, refinement and lightness.

Range View Lavinia and her filly by Conbrio, bred by Rosehill Sporthorses

Range View Lavinia

Rosehill Sporthorses have been lucky enough to secure the mare Range View Lavinia. Classified with the principle Trakehner studbook, Lavinia’s pedigree contains some of the most influential Trakehner bloodlines available in New Zealand. She is by Falkensee (Chopstick – Athlet – Malachit), out of the mare Liebesgabe (Polarschnee – Ith – My Lunaria). Lavinia is a full sister to the dressage horse Lord Lagerfield, ridden by Brigitte Learmonth, and is closely related to Monique III (New Zealand Grand Prix Dressage Horse of the Year 2008).

Lavinia has super paces, receiving a score of 8 for her trot from the Trakehner Verband classifiers, and has a temperament second to none. She passes these attributes on to her progeny, as seen in her filly Cadenza RH. Cadenza will be retained by the stud as a future breeding prospect, and her mother will continue to produce outstanding youngstock for us here at Rosehill.

Range View Lavinia (Falkensee - Polarschnee - Ith), happily at home at Rosehill Sporthorses
In the first of this two-part blog article, we looked at some of the main causes of poor condition. In this section, we look at feeding the hard keeper – main food groups and what each does, the balance between them and some feeds that can be used to help boost the body condition of a lean animal.

**Feed groups**

Fiber – a most important part of the horse’s diet! The horse’s body breaks down fiber to produce volatile fatty acids. These are used to keep the animal warm. During colder climates, it is therefore of particular importance to provide any horse, particularly a lean one, with plenty of fiber to prevent him burning off any energy or fat to keep warm. Fiber is also hugely important for the health of the digestive system itself. Fiber is not absorbed into the horse’s blood stream, but rather passes through the animal and is broken down by bacteria found in the large intestine. In this way, it helps with the passage of other feed groups through the horse. Not enough fiber can result in digestive problems, including impaction colic. A horse’s diet should consist of at least fifty percent bulk feeds to prevent these sorts of issues. Bulk feeds (those high in fiber) include grass, hay, chaff and sugar beet.
Fats are the most concentrated forms of energy available. They are essential in the absorption of fat soluble vitamins (A, D, E and K). Fats are most often fed in the form of oil, and do not have the same heating effect often resultant from grain diets.

Mares in foal or feeding a foal at foot have higher nutritional requirements from other horses, as they are eating for two.

Protein is important for growth and repair of the animal’s body, and are made up of 25 amino acids. Young growing horses and lactating mares/mares in foal require more protein than an adult horse. One must be careful when feeding protein, however – excess protein can lead to problems such as filled legs, kidney problems and overproduction of ammonia. Protein is also important for performance horses in hard work. A lack of it can result in muscle wastage and poor coat condition.

Carbohydrates are formed in plants, so are present in most parts of the horse’s basic diet (hay, grains etc). These are broken down by the process of digestion into simple sugars, which are then used to power the horse’s body. Excess carbohydrates are stored as fat – so it makes sense that, in a lean horse, an increase in carbohydrates should see an increase in body condition as well. The highest forms of carbohydrate available to horses include oats, barley and maize. By boiling or extruding these feeds, they become more digestible and less heating.

Supplements are often included in commercial mixes, but if using some of the more basic feedstuffs listed below, a complete vitamin and mineral supplement is the easiest way to go. Vitamins are important in the running of all parts of the horse’s body. Deficiencies can cause problems, but vitamins are only required in minute quantities. Similarly, minerals – particularly trace minerals – are only required in small amounts. Minerals are important in the building and maintenance of body tissues, and need to be constantly replaced. This is particularly important for youngstock, who are growing quickly, and for performance horses in hard work, who will be losing minerals through their sweat. Both vitamins and minerals need to be present in the correct balance. Many commercial vitamin and mineral supplements are available that provide these in the correct balance – I use Equilibrium for all my horses and have had good results, as well as having heard success stories from others using the
product. It is important to have your horse blood tested regularly, particularly if there is a problem, to assess if there is anything missing.

Hard-working performance horses usually require additional supplements, as they lose more minerals through their sweat than would an idle horse.

**Feeds to Fatten**

Boiled barley is a fantastic traditional feed for packing the weight onto lean horses. It is high in energy but is less heating than crushed barley. It is a ‘high-labour’ feed as it requires cooking in advance, but the results are worth it! Alternatively, extruded barley is also a good (but slightly more expensive) feed for getting the weight on a lean horse. For more information about how to cook, see our next post on how to boil barley!

This mare is heavily in foal. Apart from receiving additional good-quality hay to combat the grass shortage, she was also receiving additional hard feed and supplements to that she remained in top condition throughout her pregnancy.

Sugar beet pulp is made from the sugar cane plant. When the sugar is extracted, what remains is predominantly fiber. This remaining fibrous material is processed and packaged. Sugar beet must be fed thoroughly soaked, and will expand upon soaking. If fed dry, it will absorb the moisture in the horse’s stomach and gut and expand, causing serious digestive problems. A variety of brands exist, some of which take as little as half an hour to soak – but read the instructions on each specific brand, as soaking times may vary. Sugar beet is an
excellent way of filling the horse’s stomach when there is little grass or hay available, and will provide him with some fiber to burn off in order to keep himself warm without using up what fat reserves he has.

Vegetable oil has the advantage over grains of not being heating, and may also reduce the risk of the horse tying up. Corn oil has the highest concentrated energy of all the oils, so is the ideal choice when feeding light horses. Other common options include soya bean oil and sunflower oil. Fish oil is also an option, but many horses find it unpalatable, so it is not ideal for fussy eaters. Horses can cope with up to 1500ml of oil per day. Their bodies will take roughly 3 weeks to adjust to the change and be able to make efficient use of oil as an energy feed.

Copra meal is made by grinding down the husk of coconuts. It is incredibly high in fat content and is palatable – though, from experience, the horse may take a few feeds to get used to it – after which point they can’t get enough of it! Copra must be well soaked before feeding, and allowed to absorb as much water as it can. If fed dry, it will swell in the horse’s stomach, causing serious digestive issues. Soy meal has also been known to be a fantastic feed for putting weight on hard keepers, but can have a heating effect on some horses.

Commercial mixes are available in a wide array of brands. Your local feed outlet should be able to advise you on options, but in my experience these are costly – cheaper alternatives may not be as ‘fancy’, but they have a much better bang for one’s buck.

Parting Words...

It is important to remember that putting the weight on a horse does not happen overnight. Depending on the amount of weight to be gained, getting your horse back up to his ideal weight can take months. It is important to first determine why the animal has lost the weight, and rectify the cause, or you are pouring money down a bottomless pit. The best piece of advice I can give is this: keep it simple, and when you find something that works, stick to it!
As many a horse owner is aware, horses vary in their ability to maintain body condition. This is particularly of concern for those that own Thoroughbreds, older horses, those in hard work or those that have limited access to grass (most commonly during the mid-winter and summer months), who often get the short end of the stick and end up forced to pump hundreds of dollars into feeding their animals, just to maintain an already inadequate body condition score until the situation changes due to either a return of the grass or a lightening of the animal’s workload.
Causes of Poor Body Condition Score

**Teeth** – poor dental care in the horse can result in difficulty in chewing food, leading to poor digestion, or an unwillingness to eat due to dental pain. The ‘average’ horse (one without any particular dental issues) will require its teeth to be looked at annually to rasp down any hooks or sharp points, as well as deal to any other related dental issues. This dental pattern should begin from the age of 3, at which point wolf teeth, if present, are likely to be removed because, if left in, they will interfere with the presence of the bit, leading to problems.

**Ill health** – similarly to people, a sick horse’s digestion may not be one hundred percent. The horse may also lose its appetite and eat less due to illness, and will be using up more energy getting better – so the (possibly smaller) amount of food he is eating will not be going as far towards maintaining body condition, but will rather be put towards immunity and rectification of the horse’s health.

Young horses, such as this yearling, often have a ribby appearance due to their fast growth rate and the inability of the body to assimilate body condition at the same rate

**Age (young and growing, old and inefficient)** – young horses are often ribby and thin in appearance because everything they eat is going towards growth. Horses up to the age of two years will likely have a lanky thin appearance due to the quick rate of growth – the amount of food the horse gets in a pasture diet (and even in some grain diets) may not be enough to have the animals body condition score keep up with the huge growth happening
at the time. Similarly, in older horses as in older people, the body is not as efficient as it once was. The animal is less efficient at digesting its food, and what it does digest is used to more inefficiently run the other body systems (such as keeping the older horse warm during the winter). Age is often a key factor in the body condition of an animal.

**Parasites** – horses should be on a regular worming program. The exact worming program will depend upon the number of horses per amount of land and how they are managed, but worming should be efficient enough that horses have as low a worm burden as possible. Not only can some parasites cause permanent damage, but a high parasite burden can be a cause of poor body condition. Horses with a high worm burden will exhibit a ribby appearance, a harsh staring coat and a pot belly, as well as a flat, tired demeanor.

**Discomfort/stress** – as with people, horses experiencing high levels of discomfort or stress are prone to weight loss. Common anxiety-associated behaviours include crib biting and fence walking, and can lead to a light horse. Horses changing environment (for instance, a pasture horse learning to be stabled) can experience an increase in stress levels. Not only is the horse burning off excess energy being stressed and performing associated activities, but an anxious animal will often also be off its feed, which only complicates matters.

**Insufficient feed for individual requirements** – as with any animal, a horse requires a certain amount of feed in order to fuel his body. Not enough feed will result in a horse using up fat stores in order to replace what is required but not available. This leads to a lightening in condition, resulting in a thinner animal. Some animals are naturally leaner than others, and find it more difficult to maintain body condition. Thoroughbreds, for instance, are notorious for running lean (but of course there are exceptions). Whereas some horses can survive off the smell of grass, others require more feed to keep them looking good and well covered. Pregnant mares will require more feeding, as they are eating for two. Similarly, a lactating mare will require more feed again, as she is feeding her growing foal. A shortage of feed for her will result in her losing weight, and her milk production lessening.
Incorrect feeding – as with insufficient feed, the wrong type of feed can result in problems leading to poor condition. For instance, a high-strung Thoroughbred fed exclusively high energy feed when it does not require it will likely be over-active and nervous, leading to vices such as stall-walking and fence-walking. Stress and over-activity can lead to a loss of body condition. Deficiencies can result in similar behaviour. It is important to feed the right stuff, in the right balance, so that the horse’s requirements are met.

In part two we will discuss different feeds that can be used for helping a poor horse maintain and gain body condition.

When Will My Mare Foal?

When Will My Mare Foal?

You’ve been waiting patiently for months and months after the insemination of your mare. She’s grown into something resembling an oompa loompa (particularly if she’s chestnut), and waddles across the paddock as opposed to sidling or floating as she used to. You know roughly when she’s due – but how can you be sure you’ll be there when she finally goes into labour?

Mares generally do not like to foal in front of an audience, and many are notorious for managing to avoid spectators on the big night. In typical Murphy’s Law fashion, you’ll wait up all night, checking her, just to find that she has had it during your ten minute coffee break! Or
better yet, in the case of one of my mares, you’ll spend the night up waiting and she’ll have it in the middle of the day while you’re at work. Although some mares are quite impressive in their ability to foal unsupervised and unaided, chances are you’ll want to be there to keep an eye on proceedings and make sure nothing goes wrong, particularly if she is a first-time mother. Potential issues include poor presentation of the foal in the birth canal (which can lead to death of the foal, the mare or both in the worst cases), failure to transfer colostrum through the mare’s milk should the foal not get up and nurse, or rejection of the foal by the mare. It is always advisable to be present when possible, without becoming intrusive, to make sure things go smoothly.

Gestation

![Range View Lavinia, heavily in foal. She is shown here at roughly 330 days into her gestation, but judging by her individual pattern still likely to hold off foaling for another week or two](image)

The gestation of a mare is said to be “11 months and 11 days” – but, more scientifically, gestation generally falls within a period of 305-395 days. Factors such as the time of year, stress, age of the mare, genetics and nutrition can affect gestation length. Younger mares and old mares often have shorter gestation, as do first-time mothers. Of course, each mare and her foal are individuals, so these guidelines do not always hold true. Individual patterns of the mare in question can help give you some clues as to when the big day/night is likely to be. For instance, Range View Lavinia, one of our broodmares at Rosehill Sporthorses, has consistently foaled a week or two after when she is supposedly due – her individual pattern gives me an idea of when I should be expecting the foal. In her case, it would be very unlikely that she would have a foal earlier than ‘due’, looking at her past foaling history. Time of year has a huge effect on length of gestation also. Mares due early in the season often carry foals a little longer, whereas those due to have a late foal often foal a little earlier. Viennetta’s filly Serendipity RH was born a couple of weeks ahead of (my) schedule, as she was due rather late in the season.

There is an old saying that the foal chooses the day its born but the mare chooses when on the day. When the foal reaches full-term and is ready to be born, a chain reaction occurs. The foal’s hormones cause a change in the mare’s hormones, causing her cervix to dilate and her
uterus to begin to contract, and resulting in the beads of milk, known as ‘wax’, at the end of her teats.

Her Lodgings

By the time the mare begins to exhibit signs of impending foaling, she should ideally be already settled where she is to foal. In New Zealand’s mild climate, the best place for her to foal is in a flat, safe, clean paddock on her own. She will want privacy during this time, so it is not advisable to have her in with other horses, who may disturb her or injure the foal (though, of course, in the wild the rest of the herd is not restricted – but she would normally take herself a wee way away in order to have her foal undisrupted). If she tends to get upset separated from other horses, it may be wise to have put a quiet friend in the next paddock in order to prevent her stressing more than necessary. Stress can cause her to delay foaling.

Estimating Foaling Time

Foaling time can be estimated using various methods. There are several products that can be used to pinpoint foaling ahead of time or as it occurs, and there are observable signs that most mares exhibit prior to dropping their foal. These signs vary from mare to mare, so as you breed your mare over the years you are likely to learn her individual symptoms of near foaling.

Viennetta waxed up. That night she had her first foal, Staccato RH

Coming into foaling, the mare’s udder is usually full and shiny, and in the few days before she foals the muscles at either side of her tail will relax and take on a very soft feel in order to allow the foal space to be born. The vulva may begin to relax and take on a swollen appearance. Products are available to help pinpoint the exact time of foaling. Foaling alarms can be purchased, and are attached to the mare’s halter. When she lies down and the sensor on the halter is tipped sideways for an extended period of time (as will occur when she goes down in active labour), the sensor sends a signal activating an alarm unit kept plugged in where it can be heard. This allows you to get some sleep without missing the birth. Foaling prediction test kits are also available for purchase. A small amount of the mare’s milk is put on a test strip. A change in colour as indicated on the package will indicate if foaling is likely that night. Colour changes on the strip are caused by an increase in calcium in the mare’s milk,
which is consistent with imminent foaling.

Most mares will exhibit signs as they enter early labour, so the above products can be used in conjunction with the mare’s behaviour. These signs are often not pronounced, so only someone who knows the mare’s individual behavioural patterns well is likely to pick them up. In early labour, the cervix begins to dilate and the foal moves into position for birth as small early contractions begin. This has the effect of making the mare slightly uncomfortable, and she will continue to become increasingly uncomfortable as the contractions gain frequency and force. The muscles around her tail will relax fully, and she may pace restlessly and show signs of mild colic. She will most likely begin to show beads of milk on the ends of her teats. These beads are dried milk.

Viennetta showing a relaxed and swollen vulva typical of a mare near foaling. She had her foal, Staccato RH, that night.

The hormonal changes above cause the milk to come down. Some mares will even stream milk. These mares are losing valuable colostrum, which is necessary for passive transfer of antibodies to the foal during the vital first few hours of life. It is important that these be kept available, so they should be collected and frozen for later use should it be necessary.

**Active Labour**

These early signs show that the mare is nearing the next stage of foaling – active labour. As she becomes more uncomfortable and distressed, she may begin the get up and down and looking at her stomach. Sweating is not an uncommon symptom of stress and discomfort. This change to higher stress and more pronounced discomfort usually means that active labour has begun. With luck, the birth of the foal will proceed as normal, and you will not be required to do more than observe, disinfect the naval stump with iodine when the foal is born and ensure that the placenta is expelled within the next few hours; but in the case that something does go wrong, it is wise to be there. By observing the mare’s signs and
symptoms, knowing her well and comparing early labour signs to usual behaviour and using products to help ensure your presence when she does foal, you can make sure that all is done to ensure a smooth delivery for both mare and foal.

Viennetta gave birth to a tall healthy Warmblood colt, Staccato RH

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Tagged breeding, colostrum, equestrian, foal, horses, in foal, labour, mare, performance, pregnant, sporthorses, waxing

Academic Article: New Zealand Stud Management

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by Victoria Fawcett, 2010

The management of breeding mares, and the ways in which they are bred, oestrus is diagnosed and pregnancy is confirmed vary tremendously depending on the stud, the conditions, management methods already in place, facilities and other such factors – by no means a simple operation to organise. How studs are managed can make a huge difference to the success of the stud.

The management for breeding mares in New Zealand is different from it would be in other
countries, due to the climate. Horses usually live out all year round, which changes management techniques in comparison to the rest of the world. The size of the stud also has an effect on how it is managed – in this case, 15 Thoroughbred mares, aged 10 to 15 years of age, are to be served by a healthy fertile stallion.

The operation is to be run on a basis of serving mares by hand on the property, rather than allowing the stallion to run with the mares. Although pasture breeding is far less labour-intensive, and the stallion and mares live in their natural breeding circumstances, hand serving has many advantages over pasture breeding (Bailey, 2003).

For one, if breeding Thoroughbreds for racing, this is a necessity – artificial insemination, embryo transfer and pasture breeding will end in the resulting foal not being able to be registered for racing (Bailey, 2003).

With pasture breeding, individual management of mares is very hard, and it is nearly impossible to tell which mares have been served, which are in foal and when they were bred (Bailey, 2003). When hand breeding, the mare is observed carefully. It is also easy to be sure that the mare has been bred, and pregnancy diagnosis can be carried out at the appropriate time, rather than guessing as would be necessary with pasture serving. (You do not know when the mare was bred, so you can’t know when to check for pregnancy.)

There is also a higher risk of injury to valuable breeding and/or competition stock when breeding at pasture (Smith Thomas, 2000). There is always possibility that the stallion could be kicked by a mare before, during or after breeding, or if the mare is in dioestrus (Bailey, 2003), but one benefit of hand serving is that the risks of this happening are lower.

Another disadvantage of pasture breeding over hand mating is that owners of mares (particularly valuable mares) may not be willing to risk injuring their stock my putting the mare into the paddock with the stallion and strange mares. In hand serving, the risk of injury is diminished.

Pasture breeding can also facilitate the spread of venereal diseases, unless all mares to be introduced to the herd are determined to be disease-free (Bailey, 2003). In hand breeding, hygienic methods of breeding can (and should) be carried out effectively, thus reducing or eliminating the spread of venereal disease from horse to horse during mating (Griffin and Gore, 1998).
Fertility problems in the mares are also easier to identify when hand breeding is used (Griffin and Gore, 1998). This usually allows enough time for the problem to be corrected at the beginning of the breeding season so there is still time to achieve a pregnancy (Griffin and Gore, 1998). If pasture breeding were used, the problem might not be identified until the end of the breeding season, when mares are anoestrous and it is too late.

Oestrus can be defined as “the period of sexual excitement (heat) during which the mare will accept the stallion in the act of mating” (Parker, 2008). Oestrus in the mare is characterised by certain behavioural changes. During oestrus, the mare is receptive to breeding attempts made by the stallion.

Behavioural signs indicating oestrus include leaning into the stallion, lifting her tail, urinating, clitoral winking (lips of the vagina are pulled back, exposing the clitoris) and squatting (Parker, 2008). With enough teasing, these signs usually become quite apparent if the mare is in season; however, if the mare is not in season (in dioestrus), she will likely exhibit signs such as laying her ears back, kicking or striking out at the stallion, squealing, clamping her tail down and showing general agitation when the stallion is presented (Asa, 1986).

There are also several physical ways in which oestrus and ovulation can be identified. Experienced vets can identify oestrus via rectal palpation or ultrasound scanning. Both can provide accurate information about where in her cycle a mare is, the size of follicles and pregnancy.

In the case of the stud in question, a combination of teasing and ultrasound scanning would be used. Teasing regularly encourages mares to cycle regularly and most mares display oestrus signs when teased (Bailey, 2003). The scanning would provide a visual image of what is going on in the mares’ reproductive systems, from follicle development to the identification of ovulation. This information would help the vet and stud manager make the best decisions as to when to serve, so the mare is most likely to get in foal.

In this case, stocks will be required on the stud in question. The mare is led in through one way and the gate shut behind her and in front of her. The gate prevents the vet being kicked during scanning. The sides are high enough to prevent the mare jumping out, but the back gate is low enough that the vet is able to do his job.

The most reliable and efficient way of identifying oestrus is through regular teasing at the stud. “Teasing, or trying, is the term used to describe the management procedure for
establishing whether or not a mare is in oestrus” (Bailey, 2003) and, on large commercial studs, is performed using a ‘teaser’ stallion; however, for smaller breeding operations, and in this case, the stallion doing the actual mating also acts as the teaser.

Teasing stimulates the release of oxytocin in the mare, which initiates processes that enhance ovulation and the transport of sperm and the egg to where they should be for conception (Smith Thomas, 2000). This release of oxytocin means that most mares, if teased regularly, will show signs of oestrus (Smith Thomas, 2000).

The facilities for teasing must be safe and strong, to resist kicks from the mare, or attempts to breed from an over-eager stallion (Griffin and Gore, 1998). Safety should be paramount, and all people helping must wear hard hats and gloves. There are several ways of setting up a teasing area, from the simple to elaborate, using adjacent pens, crushes or a reinforced fence line or teasing barrier (Smith Thomas, 2000). For the purpose required, a well-padded teasing barrier will be sufficient. The stallion and mare are allowed to meet over the barrier. The barrier must be low enough that the stallion can get his head over to court the mare (Bailey, 2003). They are allowed to meet face to face. A receptive mare will show signs of oestrus, whereas one in dioestrus will likely put her ears back and kick or strike out (Griffin and Gore, 1998). It is vital that the barrier is strong enough to withstand kicks and other violent reactions from the mare, should she be unreceptive (Bailey, 2003).

Once oestrus has been diagnosed in the stud’s mares via teasing, an experienced vet scan would the mares to determine the size of the dominant follicles, and determine when each is likely to ovulate, so each can be bred at the most appropriate time.

The process of breeding in-hand is fairly straightforward, but safety must be the first priority. All people involved should wear fastened hard hats, gloves and sturdy closed footwear. Two or three people are required for the procedure of hand breeding (Griffin and Gore, 1998).

Before breeding, the mare’s perineal area is washed with warm water, then thoroughly dried, and her tail is wrapped with bandage to prevent the hairs getting caught up during the act of mating, causing penile lacerations (Griffin and Gore, 1998). If her rump is dirty this is also cleaned, as the stallion’s penis often touches the mare’s rump during mounting, potentially leading to bacteria entering the mare’s reproductive tract and leading to infection (Bailey, 2003). The stallion’s penis is also washed with warm water and a mild soap solution once an erection has been obtained (Griffin and Gore, 1998).
Once mare and stallion have been cleaned for breeding, the mare is led into the breeding area. The breeding area must be large enough to allow either horse to get out of the other’s way; should have firm footing; and should be free of distractions or interference. The ideal is a purpose-built yard or enclosure. The mare should be wearing a halter or bridle – whatever is necessary to have control (Griffin and Gore, 2003). The stallion, equipped with a bridle (or at least a sturdy halter, with a nose chain if needed) and a lead long enough that the handler can be at a safe distance during breeding, is led into the breeding area (Griffin and Gore, 2003). He is led up to the mare’s left shoulder at a 45 degree angle (for safety reasons and to allow the mare to see the stallion), and they are allowed to sniff and nuzzle (Griffin and Gore, 1998). Handlers must stand out of kicking and striking range in case the mare is unreceptive or difficult and tries to strike or kick out (Griffin and Gore, 1998).

If the mare is in standing heat, the stallion is allowed to work from shoulder down to flank (Griffin and Gore, 1998). She should assume a breeding stance if receptive, spreading her legs and tipping her pelvis (Griffin and Gore, 1998).

The stallion should not be allowed to mount the mare until he has obtained a full erection. He will then mount the mare and position himself behind her for intromission and ejaculation (Griffin and Gore, 1998). The mare handler’s job is to hold the mare steady and prevent her moving forward during breeding (Griffin and Gore, 2003). After mating, the stallion is allowed to dismount at his leisure, and is led away from the mare (Griffin and Gore, 1998). It is wise to turn the mare’s head to the left as he dismounts, in case she tries to kick (her quarters will move right, away from the stallion) (Griffin and Gore, 1998). The mare can then be removed from the breeding area.

Post-cover hygiene is as important as it is pre-cover, and the stallion’s penis is washed with warm water and a mild soap, as for before breeding (Griffin and Gore, 1998). This step is very important in the prevention of venereal disease spread.

Breeding the mare every two days throughout oestrus should ensure that there is live motile sperm inside her when she ovulates, maximising her chances of getting into foal (Bailey, 2003). Once she has ovulated, pregnancy diagnosis is the next step.
Pregnancy diagnosis in the mare is not as simple as looking for a failure for her to come back into season at the appropriate time. Although this can be used as an indication, 5 to 10 percent of mares show signs of oestrus during pregnancy (Blanchard et. al., 2003); therefore, this method is not appropriate for explicit diagnosis, though it can be suggestive one way or the other (Griffin and Gore, 1998).

Many studs will tease the mares roughly 12 days after ovulation (or mating, if ovulation was not confirmed), and will have her examined by a vet if she has not come into season within about 16-18 days (Bailey, 2003); as previously stated, however, some pregnant mares exhibit signs of oestrus despite being in foal. If this method were used, the pregnancy may be missed altogether.

Ultrasound scanning is the most accurate way of diagnosing pregnancy in the mare, and is the method of diagnosing pregnancy that would be used for the stud in question. This method involves a probe attached to a scanner (with a screen) being inserted into the mare’s emptied rectum and moved over the reproductive tract (through the intestinal wall), sending a visual message back to the screen on the scanner (Parker, 2008). The vet is then able to diagnose pregnancy, as well as twin conceptions, embryonic death, ovary and uterine disease and determining length of gestation (Parker, 2008).

For the small stud in question, scans would be performed by an experienced vet 18 to 21 days after breeding. If the mare did not get into foal, the scan will provide a better picture of where she is in her cycle. This gives the vet and stud managers more information and increases the likelihood of breeding being done at the right time and the mare conceiving.
Blood tests can also be used to diagnose, although they are not used as much as the ultrasound scanner these days (Bailey, 2003). They can, however, provide the vet with information as to how the pregnancy is progressing by measuring levels of certain pregnancy hormones in the mare’s blood (Bailey, 2003). One of the obvious drawbacks of this method used alone in determining pregnancy is its inability to diagnose twin pregnancies.

Another method of diagnosing pregnancy is rectal palpation. When the mare becomes pregnant, the muscle tone of her uterus becomes firmer and the cervix closes tightly, and is plugged by a mucous seal as the pregnancy progresses (Bailey, 2003). An experienced vet can read these signs and diagnose the pregnancy; however, it is not always possible to confirm whether there are one or two foetuses present, or how healthy they are; hence, ultrasound scanning is a more accurate method, and provides more information about the foetus and the state of the pregnancy.

Twin pregnancies are also far easier to diagnose using scanning (Griffin and Gore, 1998). Twin pregnancies rarely end well – often in abortion, death of one or both twins or, should the mare carry them to term, death to twins and mare. The most common method used by vets for resolving twin pregnancies is to squeeze a conceptus through the uterus wall, leaving one twin foetus (Bailey, 2003). From here the pregnancy can continue normally.

The management of mares at a small stud can vary tremendously. In the case of the stud in question, the most effective methods have been chosen for the circumstances – hand serving, teasing and scanning to identify oestrus and pregnancy and specific facilities for teasing and serving mares; however, for an even slightly different stud, other methods may be more effective or efficient. The most efficient method of management depends on facilities available, conditions, the stock and opinions of managers and vets. The main concerns in management are efficiency, safety and hygiene – other factors depend on circumstances and views of the particular stud.
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