

A Lamé Horse

Lameness is unfortunately a common complaint in horses. This can range from a very subtle lameness (which may present as a change in performance or unwillingness to perform) through to an obvious lameness. Lameness is usually as a result of pain although it can be a mechanical impediment to the horse's movement. Pain from skin wounds, connective tissue bruising, muscle pain, arthritis (joint inflammation), tendon sheath and bursal inflammation, tendon and ligament injury, abscess and injuries to bone can all cause lameness. Some of the causes of lameness are more easily diagnosed and treated than others.

WHERE IS THE LAMENESS COMING FROM?

Forelimb lameness is easier for most people to recognize than hind limb lameness. Hind limb lameness is generally much more difficult to visualize and diagnose. This is especially true of subtle upper limb problems. The massive musculature of the upper hind limb makes it much harder – even for an experienced examiner – to see and feel deeper structures and very difficult to image these structures using x-ray and ultrasound.

It is worth bearing in mind that a high percentage of lameness in the forelimb originates in the feet. Upper forelimb lameness is not common in adult horses. Another important point is that the site and nature of injury cannot necessarily be distinguished based on the appearance of the lameness. To aid in determining the cause of the lameness a systematic process has been developed called the lameness exam.

THE LAMENESS EXAM

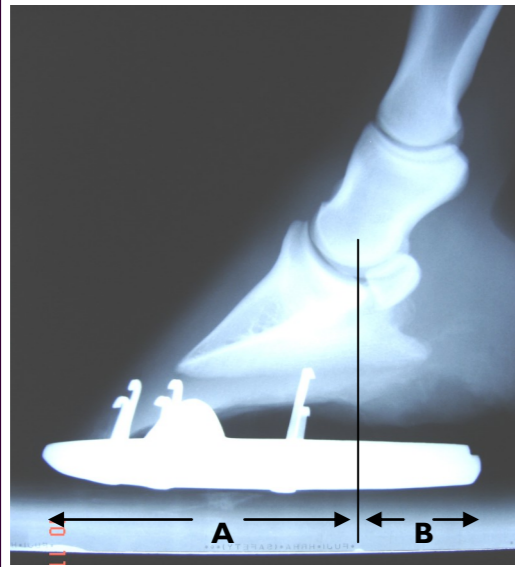
The lameness exam is a multi-step methodical veterinary exam with the aim of determining where the pain originates. A systematic investigation of a lame horse does take time but is important although not all lame horses will need to go through the full examination to reach a diagnosis. Ideally we need good facilities such as a level, firm track for trotting up and possibly both a firm, non-slippery surface and a softer area for lunging or riding the lame horse. Only by finding the pain site and alleviating the pain can lameness be properly treated.

The full lameness exam consists of

- (1) a thorough history,
- (2) an exam with the horse standing and hoof testing,
- (3) an exam with the horse walking and trotting in a straight line and possibly on the lunge,
- (4) flexion tests
- (5) diagnostic anaesthesia – nerve blocks
- (6) imaging the site of injury – radiographs, ultrasound, MRI and others.

The diagnosis and treatment plan can then be derived from the results of the lameness examination.

Here at Riversdale we can perform lameness examinations at the clinic. Once a problem area has been isolated we can x-ray the area if this is thought to be necessary. A common site of lameness is the foot and we routinely perform foot balance radiographs. We also have been x-raying the feet of horses with laminitis (founder) to aid in treatment and prognosis. Using the x-rays and calculations made on them we then work with your farrier in developing a trimming and shoeing programme.



In this x-ray of a horse's foot, to evaluate foot balance, draw a line from a point on the P2 bone to the shoe. This should divide the shoe in half—i.e (A) should equal (B). In this example the toes are too long. By trimming back the toes and having the shoe extend under the heels the foot balance would be much improved, putting less strain on joints, tendons and ligaments. This is just one example of how x-rays can help in the treatment and prevention of lameness.

Michelle Dicken MA VetMB MACVSc (Medicine of Horses)
CertAVP (ESST) MRCVS



Horse Reminders

- **Keep bot eggs off legs**
- **Hoof care**
- **Worming treatment for foals**
- **Check condition of brood mares**
- **Dental check horses not holding condition**

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Pet Reminders

- **Vaccinate prior to boarding at kennels**
- **Get pets Christmas presents**
- **Check for barley grass**
- **Worm cats and dogs**

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NSVS Ltd

December 2011

Situation Comment

We would like to wish everyone a Happy Christmas and a safe and Prosperous New Year. Thank you to all for your support this year and we look forward to seeing you all again next year.

Spring is over and hopefully summer will bring some more settled weather—but not a drought. Feed levels are good in general but making silage and tractor work have both required precision timing. The moisture and moderate temperatures have led to significant worm burdens in lambs already. FEC's before weaning are the best way to monitor this.

Mating is well through for dairy farms and submission rates are generally good. Production has been variable with several farms peaking lower than usual. Velvet and venison are both looking healthy, so Rudolf and the crew had better be on form later this month.

Work on the new building is moving rapidly towards completion. The plan provides for a better working environment for the staff, more space and modern small animal facilities. The club have shown a great deal of foresight by building for the future.

Staff News

Paul just returned from his Vet Class 40 year reunion where a good time was had by all. The group attempted to relive their youth and while the events on the night may have been more restrained, the effect the next morning was similar to years gone by.

We will soon be saying goodbye to Tasha, she is moving to Dunedin. We would like to thank Tash for her contribution over the last 2 years and wish her, Darren and Jack all the best for their move.

Hannah Win will be joining the team in Riversdale as a vet nurse from mid December. Hannah lives locally and has worked as a vet nurse in Otago. We are pleased to have her on board.

Lily

I think we've had most types of animal through the Smith household, cats, dogs, budgies, chickens, goats, horses, sheep, pigs, mice and even rats. So I have many (sometimes unfortunately) memorable stories to tell, such as when the budgie lost an eye to the cat or the goat who liked to relax on our deck chairs while we were at work!

However, as puppy classes are starting up again, I thought I would tell you about our newest (and my husband says last!) addition. Lily is a Tibetan Spaniel / Bichon cross puppy and is only 12 weeks old, however she has already twisted us, and most other people she meets, round her very small paw! I decided that after a year of having mostly collie or very 'energetic' type dogs it was time for me to have a more relaxed lap-dog to cuddle up with rather than run about after, and so far Lily has performed this duty perfectly.

When she first came home I was determined to do everything by the book, after all I had just been to a puppy training session with the 'Dog Guru' so thought I was well equipped..... I set up a puppy enclosure in the kitchen and started toilet training and getting Lily used to being left alone at night. "No more animals allowed in the bedroom" said my husband "can we please have just one animal free room", anyway, it only took three nights of her crying before he relented and now she sleeps happily with us. Outwitted by a puppy! Otherwise the training is going well. After previously being fed scraps and therefore turning her nose up at 'boring dried food' she now eats what we give her, hunger being a great motivator. She will now also walk on a lead, although not very far with her small legs! We have to have lots of rest stops. She will sit but we are still working on 'stay'!

The toilet training is also going well and I can thoroughly recommend using the 'crate training' method for this, although to do this properly I had to bring Lily to work with me so I could keep an eye on her. Now she comes every day and likes to say 'Hi' on morning rounds to all the other dogs and cats and, I'm sure, give them some doggy sympathy.

Tasha Smith

Improve Mastitis Treatment Success

-Know what you are treating

Mastitis cases which don't resolve are frustrating and ultimately expensive. Improving treatment success reduces cost and shortens the time a cow is out of the vat. One key is to know what bacteria you are dealing with by taking milk samples and having them cultured. Make collection of milk samples part of your mastitis treatment regime.

Milk cultures help to build a picture of not only the cause of a case of mastitis but the best antibiotics to use and what may be contributing to your mastitis problem. Different bugs respond to different treatments and spread in different ways. Cows respond to all bugs in much the same way, the nature of their milk changes. It is therefore impossible, unfortunately, to diagnose a bacteria by the colour or consistency of the cow's milk. Milk samples are the only way.

Milk cultures are a valuable tool but not perfect. A certain percentage will not produce a result—"no growth". Another common problem is "heavy mixed growth". This is the result of dung contaminating the sample. Collection of samples must be done cleanly and carefully to give a useful result.

Recommendations:

1. Collect samples before starting treatment, do so as cleanly as possible.
2. Freeze samples unless being cultured immediately.
3. If mastitis resolves—discard sample; if not - have it tested.

Michael Baer BVSc

Lame Cows –Backing Gate

Dealing with lameness in your herd is not just a financial burden, but also affects staff morale, especially during the stressful calving and mating season, when lameness is often prevalent. Gearing up to deal with such problems will relieve much stress.

Correct use of the backing gate is crucial in reducing lameness, this is especially true at this time of the year when cows are in the yard for longer over mating, and the use of relief milkers is high. All staff, including relief milkers must know and understand the rules of your shed, in particular the way you use your backing and/or top gate.

It is important to remember not to overuse the backing or top gate as this will reduce the space each cow has, resulting in pushing, slipping, forced changes to milking order, claw injuries resulting in lameness. Here are some tips on how to manage a backing /top gate well:

Cows are creatures of habit and like routine. Make sure all staff have the same routine and system when moving gates so cows know what to expect.

- Do not have the backing gate on for more than 5 seconds at any one time
- Do not use the backing/top gate at all for at least 15 minutes after the last cow enters the yard. Cows need space to reform their milking order for good cow flow.
- Ensure your backing gate moves no faster than 1 meter in the 5 second time period it is on for round yards and no more than 0.5 meter in the 5 second time period it is on for rectangular yards.
- Avoid electric wires on your backing gates. Address the other reasons for poor cow flow through the shed rather than pushing cows with backing gates.
- Above all be patient!!! Cows can lose trust in one milking, but take 6 weeks to regain it.
- Remember - No cows with heads up in the yards

If you do have a problem with lameness or are interested in minimising the risk of your cows becoming lame, consider joining the Healthy Hoof Programme - a step-by-step approach to managing lameness on dairy farms.

Contact us at NSVS for more information.
Rochelle Smith BVSc MACVSc

Deer reminders

- **Supervisory visit before 15th December**
- **Fawning**
- **De-velvetting—2 year olds**



Eye Conditions in Dogs

Eyes are one of nature's wonders, even more so when you consider that they are formed from different embryonic tissues (ranging from skin to brain). Many things can go wrong with eyes either during development, or later in life, and some of these changes can be subtle and progressive. Early detection of the cause and early intervention is key, because conditions left undiagnosed and untreated may mean damage is irreversible. Conditions affecting the eyes have strong breed 'predilections' and so knowing the breed often means anticipating the likely problem.

Some of the conditions for which early detection is very helpful to preventing serious deterioration include uveitis (or inflammation of the internal structures of the eye), glaucoma (where the pressure in the eye builds up), dry eye (insufficient tear production which can be subtle) and ulceration of the outer transparent structure of the eye known as the cornea. Many eye problems, (such as uveitis) can lead to others (eg glaucoma, and blindness) and determining the initial problem can be difficult.

As a pet owner, look for any of the following signs, as they may be warnings:

- unwillingness to allow head to be touched, including being suddenly 'fidgety' or aggressive;
- a cloudy look to the eye;
- the blood vessels around the periphery of the eye look really prominent;
- recurrent blinking or spasm of the eye (ie closing of the eyelids)
- a chronic discharge from the eyes, especially one that is not clear; but also in cases whose discharge is clear;
- 'photophobia', ie an uncomfortable reaction to bright light;
- any obvious injuries to the eye (eg lacerations, dog bites) should be investigated, even if everything seems normal;
- poor vision at dusk or in poor light;
- older pets or pets with pre-existing medical conditions – these should be assessed more regularly, ideally every six months.

Nigel Dougherty BVSc MRCVS

Preventative Drenching of Calves

Achieving target weights at weaning and at the time of first mating are crucial for achieving maximum lifetime production. Rotational grazing in combination with a preventative parasite control plan reduces the impact intestinal parasites have on growth and production.

Dairy calves are at an increased risk of parasitic infection than beef calves due to their early weaning and husbandry practices that promote a build up of parasites at pasture. It takes approximately 15- 18 months for immunity to develop against gastrointestinal parasites. However, all cows will have some worms present.

There are three major intestinal parasites causing disease in calves (*Ostertagia*, *Trichostrongylus* and *Cooperia*). Most clinical (and subclinical) disease is caused by *Ostertagia* (brown stomach worm), found in the abomasum. *Trichostrongylus* can cause disease in spring and winter but is the easiest to control with the drench families available. *Cooperia* is a small intestinal parasite that is most susceptible to levamisoles. There is seasonal variation in the peak distribution of each of these parasites that may alter the most effective drench family to use.

Next to consider is the form the drench is available in. Pour on and injectable drenches may be the easiest drench products to use but an oral drench may provide better parasite control if used appropriately.

Preventative drenching programme

An example of a preventative drenching programme is as follows:

A combination oral product, such as **Arrest C** or **Scanda**, is recommended to prevent the autumn peak in parasite challenge. Oral drenches should be given every 4 weeks from December to March. Depending on the perceived degree of challenge it can be advisable to drench early April as well. It is recommended to drench prior to winter to reduce the subsequent spring challenge. In

April/May an injectable product, such as **Dectomax**, is probably sufficient due to the parasites involved.

Please talk to one of your vets if you would like to discuss a preventative drenching programme for your farm.

Fran Knighton BVSc BSc

Foetal Wastage

Hinds are set stocked and fawning has started as this article is being written. A number of farmers have commented 2011 weaning numbers are lower compared to previous seasons despite acceptable scanning rates. Indicating we have a production loss occurring but often it is difficult to quantify this and attribute it to foetal loss, fawning losses or post fawning losses.

Research work undertaken by Peter Wilson of Massey University has shown variable weaning rates and reproductive wastage constitutes significant cost to NZ deer industry. The highest reproductive inefficiency occurs in rising 2 year old hinds (average 70%). Failure to conceive and loss of calves from birth to weaning have been conventionally regarded as the main areas resulting in sub-optimum reproductive efficiency. Foetal wastage has been historically been regarded as a minor problem, likely because they are difficult to detect or have been of insignificant magnitude to prompt investigation. Peter Wilson is requesting samples of aborted foetuses from the Southland region for research purposes.

We realise it is a time of year when often there is a hands off approach to the hinds but even observation from a distance can detect dead foetus. The samples don't have to be totally fresh as there will be DNA testing undertaken looking at leptospirosis and toxoplasma in particular. If you have any further questions or sample material, please contact your vet.

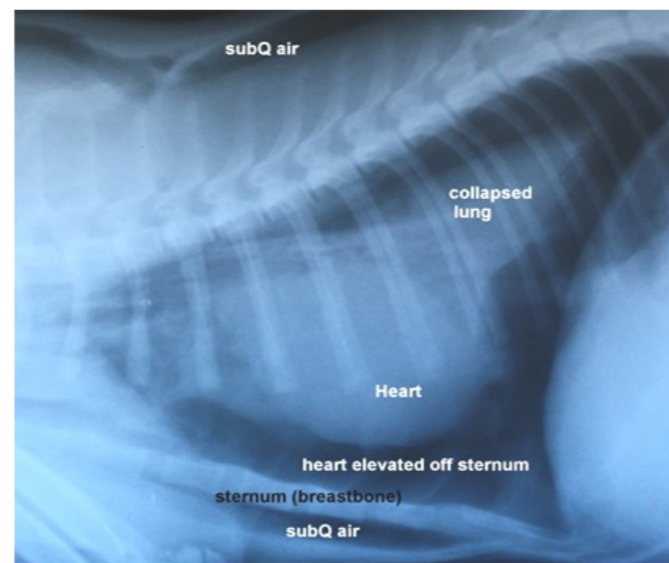
Jill MacGibbon BVMs MRCVS

Rose-When a small cut was not quite so simple

Rose is a 10 year old working dog that presented for a laceration on the side of her chest. She had been knocked by a sheep into the side of the lambing trailer. She was quiet, had a fast heart rate and was a bit pale when she arrived at the clinic, although overall she did not look too bad. Rose was given pain relief and started on fluids before being sedated. Once sedated the extent of Roses injuries could be assessed. There was a 1 inch hole extending into her chest. The hole in the chest abolished the negative pressure needed to inflate the lung and so Rose's left lung had collapsed. When air surrounds the lung in the chest this is called a pneumothorax. Rose was given an emergency general anaesthetic, the hole was closed with sutures and the lung was re-inflated. Rose had also sustained some broken ribs from the knock. Post surgery Rose received pain relief, antibiotics, anti-inflammatories and cage rest.

Rose is now fully recovered and working hard. Sometimes injuries that look superficial or innocuous may be hiding something more sinister. It is worthwhile getting a vet to look at them to be on the safe side.

Rebecca Morley BVSc BSc



Xray of a pneumothorax

Brucella Ovis Infection of Sheep-Prevent a fertility disaster

Infection with *Brucella ovis* will result in chronic lesions of the male genital tract which leads to reduced fertility. The disease is transmitted mainly through rams having sexual contact and by transmission from infected to non-infected rams serving the same ewe.

The organism is a small gram negative bacteria which can enter the body through any mucous membrane. After infection the body's defence mechanism may overwhelm the organism resulting in a transient infection only or there can be a bacteraemia and the organism will localise in the epididymis of the testes. The earliest lesions usually develop in the tail of the epididymis.

Natural infection by *B.ovis* has been well recorded in rams since the 1950's and now also in stags. Infected rams excrete the organism in their semen indefinitely, so the disease is considered to be venereal in nature and can even be spread amongst rams by sodomy. Ewes mated to infected rams can become infected but infection is usually transient and rarely persists from one breeding season to the next.

Rams can become infected by mating with a ewe previously served by an infected ram during the same oestrus period and also by direct contact with other infected rams. The transmission amongst rams increases as sexual activity increases towards and in the mating season. Once a ram is infected with *B.ovis* a detectable antibody response usually develops in about six weeks. Using infected rams for mating generally reduces the lambing performance of the ewes and produces a protracted lambing season. The only way to eliminate this risk is by eradicating *B.ovis* from the flock.

Diagnosis is usually established in the first instance by palpation and can be confirmed by blood testing. In flocks of rams with established infections, blood testing of the whole flock will usually reveal many more infected rams.

B.ovis can be eradicated from flocks by a blood test and cull procedure. If there are positive blood tests the flock will be retested until a clear test is obtained. A further clear test at a interval of at least 60 days will ensure that no ram in the incubation stage has gone undetected.

B.ovis Flock Accreditation Scheme

All rams breeders should belong to an accreditation scheme and ram buyers should demand to see their annual accreditation certificate when buying rams from them.

The annual accreditation test involves:

1. Scrotal palpation and blood testing all stud rams and teasers over the age of 15 months and any ram less than 15 months that has been used for mating.
2. Commercial rams over the age of 15 months must be palpated and the whole flock or 20 rams, whichever is the least, and any ram with epididymis, must be blood tested.
3. All two tooth rams for sale must be palpated within 3 months of sale and any with epididymis blood tested and culled.

I think the risks involved in introducing *B.ovis* to your ram flock are buying in store lambs that are entire or cryptorchid from a farm with unknown or infected *B.ovis* status. Also buying rams at clearing sales when their status is unknown and buying in two tooth rams from a breeder whose status is unknown or is not on an accreditation scheme.

Paul Langford BVSc

Leptospirosis-What you need to know!

Leptospirosis is a bacterial disease spread from one animal to another, including pigs, dogs, rats, sheep, deer and cattle. In cattle it is spread through urine and aborted materials. Lepto can be a cause of abortions, a drop in milk production in cows and red water in calves, which can lead to death in these young animals. It can also have no obvious effects in cattle, allowing it to be present without you knowing it is there.

Lepto is also a zoonotic disease, meaning it can pass from animals to humans, which is why awareness of it is so important in the dairy industry. It is spread via contact with urine and aborted materials. Workers in the dairy shed, meat workers and veterinarians are at the highest risk as they are often standing directly in the firing line of urine sprays or handling kidneys. Urine can enter through the mucous membranes of the eyes, nose and mouth and also through cuts on hands. It begins as a septicaemia, circulating in the blood before localising in organs, particularly the kidneys. Lepto appears as flu like symptoms, but can rapidly develop into organ failure and even death. Symptoms include fever, chills, vomiting, diarrhoea, abdominal pain, headaches and muscle aches. It always requires hospitalization.

Hygiene is a must in the dairy shed. No smoking, eating or drinking in the shed are rules the employer must enforce. Having gloves available for staff is also a necessity, as well as other protective gear such as aprons and milking sleeves.

Luckily lepto is able to be controlled by vaccination of our cattle. Vaccinating cattle involves two injections as a calf and annual vaccination. We recommend vaccinating calves from 8 weeks old with two shots 4-6 weeks apart and then another shot in April/May to realign with the main herd. Heifers should also be done at the same time. If vaccinations are more than a year apart the programme will need to be started again as the efficacy of the vaccine wears off. All classes of stock should be vaccinated including any beef animals grazing on farm and also any pigs.

There are two options for administering vaccine to cattle under OSH conditions. One is that it has to be administered by vets. The second is a programme called Leptosafe which involves on farm awareness training for staff by a vet. This then allows farmers to vaccinate stock themselves, being more convenient for some bigger farms.

Lepto is a serious but controllable disease present in our dairy herds. Education and vaccination will reduce the risks it has on us and our cows.

Megan Reidie BVSc

Cattle Reminders

- Dairy calves—copper
- Dairy calves—worm control
- Bulls—watch for soundness
- Cows monitor SR and NRR
- Check lame cows
- Rotate breeding bulls
- Arrange winter grazing



Challenges to Summer Production

Animal production is most efficient when we supply a consistent stream of nutrients to the rumen. Over late spring and into summer this can be a real challenge. Balancing your animals' diets is essential for maximum production.

Grass based production has many advantages as the animals do most of the harvesting and feeding out themselves, which saves time and money.

However it does also create difficulties in providing a consistent stream of nutrients.

1. Old pasture versus new pasture:- Growth patterns, pasture species, mineral uptake, digestibility and palatability vary.
2. Stages of growth:- The chemical composition of pasture and so its suitability as feed depends on its stage of growth. Grazing pasture at the same stage all the time is difficult.
3. The weather:- Too hot, too cold, too wet, too dry. Pasture is like an English tourist!!

We attempt to solve these problems by strategic use of supplements, topping, pasture rotation or set stocking, pasture preservation as silage or hay. When deciding what to do over the summer a few principles should be considered.

1. The aim is to provide a consistent, balanced diet.
2. With this in mind, supplements should be purchased to provide bulk, energy or protein based on what is deficient in the pasture.
3. When purchasing supplements price comparisons should be done with regard to the nutrient being purchased. Dry matter is a fair basis of comparison to bulk up intake but if you are purchasing energy, use energy content to compare prices.
4. Cutting silage this week and feeding it next week only helps with global warming.

Michael Baer BVSc

Scanning Information-How we can help

One of the major improvements made to reproductive management over the last few years has been the advent of early pregnancy diagnosis using ultrasound scanning techniques. Advances in technology and skills now means that early season pregnancy testing is both fast and accurate.

Scanning is used essentially for three main reasons;

To find cows pregnant to AB-

This is straightforward-scan the herd at least 6 weeks from when AB stopped. Eg. If AB stopped on 1st of December scan about the 12th of January-Cows which are not detectably pregnant at this time will either be in calf to the bull or will be empty. One of the major benefits of early scanning is the indication that pregnancy rates to AB may be lower than anticipated. In these cases a management decision can be made to leave the bulls running with the cows for 2-3 weeks longer than usual and hence to have more late calving cows or more inductions. In most circumstances it is better to have more late calving cows than to have a higher empty rate.

To find late calving cows/inductions-

Work out the date when you want everything calved by, e.g., 1st October. That means that all cows in calf before the 22nd of December will be calved before this cut off date. Therefore, if we scan 6 weeks after the 22nd Dec, cows at least 6 weeks pregnant will calve in the time frame we require them to. Cows less than 6 weeks pregnant would be calving after the 1st of October-these cows would therefore possibly be inductions. An additional benefit of finding late calving cows is the more efficient grazing management of pasture-late calving cows can be held off the milking platform and can be fed differently over winter. (They would thus be more likely to meet the condition score requirements for induction cows of between 4.5 & 6.5).

To find empty cows-

The later this scan the better, as with most 'normal' pregnancies there is a chance that the pregnancy will not go full term (due to embryonic loss or abortion). Therefore, if all you want to do with scanning is to find your empty cows, the testing is best done later in the season.

Scanning can also be used to age pregnancies up to 14 weeks gestation. However variations in individual animal size mean that scanning is less accurate beyond this date.

We recommend rescanning all cows as a way of detecting any slips that have occurred in natural calving cows. The cost of scanning these animals a second time is recouped by not needing to winter feed empty cows.

If farmers are intending to induce cows it remains vital accurate pregnancy testing data is on hand before contemplating inducing any cows — cows can only be induced if they are between 8 and 12 weeks from their predicted calving date, provided they fit all other criteria. **We are only able to induce cows from herds which have this accurate pregnancy testing data.** Remember also that cows need to be identified at least 60 days prior to the induction programme starting. Furthermore farms need to have evidence of the existence of a plan to manage and minimise inductions-early scanning and identification will go a long way towards this. Remember this coming season a maximum of 4% of the herd can be induced.

Now is the time to contact us at the clinic to sort out scanning and a plan for the coming season, to determine the best times to pregnancy test your herd to achieve the specific outcomes which are most relevant to you. Remember we have fixed, and back pack scanners, and can scan in rotary sheds, herringbones and up races.

Morgan Greene MVB MACVSc

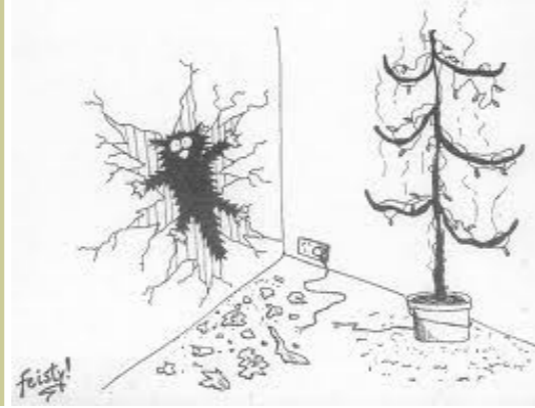
Create Teasers Now

Spread out lambing can cost you time, effort, emotion and money. Teasers used correctly will compact your lambing ensuring a prompt start, getting more ewes (or hoggets) in lamb sooner. Conception rates will be improved by ensuring ewes are going into their second or third cycle when the ram goes out (more fertile and fecund than the first), and giving you more flexibility at weaning. Now is the time to create your teasers before next mating (at least 6 weeks prior to use – so >9 weeks pre-mating). Vasectomies are easiest done at the clinic but can be done on farm with a person to help hold the rams. It is a fairly simple procedure done under local anaesthetic. Young rams are easier to vasectomise and may have a longer life on the farm, but it may be more ideal to use older rams that know what they are doing and have plenty of ram 'cologne'. Ratios can be as high as 1:300 or 1:500 on flat farms, but for hoggets allow for teaser ratios of 1:70 or up to 1:100.

Rochelle Smith BVSc MACVSc

Sheep reminders

- **FEC lambs—drench check test**
- **Flystrike prevention**
- **Wean lambs**
- **Have FECRT carried out on lambs**
- **Palpate ewes udders—cull hard or lumpy udders**
- **Vasectomise rams**
- **Monitor lamb growth rates**
- **Organise abortion vaccine requirements**



Bull Power-How many bulls do we need?

How many bulls should you be running with your herd?

In-calf rates during the natural mating period are typically poor for many New Zealand dairy farms, possibly due to insufficient bull power, and poor bull management. Are you confident that you have correctly estimated the bull power requirement for your herd?

The number of bulls that you run with your herd during the natural mating period depends on your herd size, how long the artificial breeding (AB) period is, and how many cows get in calf during the AB period. The number of cows that get in calf during the AB period is determined by how many cows are submitted, and how many of those cows conceive to an insemination.

Pregnancy Rate = Submission Rate x Conception Rate

Every season, your herd size, the length of the AB period, or your herd's submission or conception rates may change. It is important that you assess the number of bulls you have in the herd each season to ensure you have enough to service non-pregnant cows.

The Bull Power Calculator from DairyNZ allows you to estimate the number of bulls that are required for your herd.

What is my herd's conception rate?

Accurate conception rates can only be found through pregnancy testing. If you are uncertain of your herd's conception rate, use 50% as an estimate. Industry statistics show the national average conception rate (to first service) is 53%, lower quartile is 43%, and upper quartile is 62%. If more cows are returning during the AB period than in a typical season, then your conception is probably lower so adjust bull numbers accordingly. Remember conception rate is not the same as non-return rate.

BE AWARE:

- The Bull Power Calculator works on the basis of 1 bull per 30 empty cows.
- The calculator will tell you the number of bulls required in **the herd** at all times during the natural mating period. You should have **double** this number of bulls in total, to allow for regular rotation.

If you are using a synchrony or CIDR programme and expect large groups of cows to be cycling at the same time, 1 bull per 30 non-pregnant cows will be insufficient. Consider getting your AB technician to return during these busy cycling periods.

Example to calculate Bull Power

750 cow herd, 85% Submission rate, 50% Conception rate, 5 weeks of AB.

First 3 weeks

750 cows non-pregnant

85% of 750 cows = 638 cows submitted

50% of 638 cows conceive = 319 cows in-calf

Weeks 4 and 5

431 cows non-pregnant

56% submission rate (2/3 of 85%)

56% of 431 cows = 241 submitted

50% of 241 cows = 121 cows in-calf in weeks 4 and 5

Total cows in-calf = 319 + 121 = 440

Total cows not pregnant = 750 - 440 = 310

Bulls required = 231/30 = 10.3

Therefore 11 bulls are required to be in the herd at all times during natural mating, in other words 21 bulls are needed on the farm to cope with rotation.

This is a rough estimate but does give a guide bearing in mind that the calculations do make some assumptions e.g. submission rate remains constant throughout mating.

Stay!

I pulled into the local supermarket car park and rolled down the car windows to make sure my Labrador pup had fresh air. She was stretched out on the back seat and I wanted to impress upon her that she must remain there. I walked to the kerb backward, pointing my finger at the car and saying emphatically, "Now you stay. Do you hear me? Stay! Stay!" The driver of a nearby car. A pretty blonde young lady, gave me a strange look and said, "Why don't you just put the hand-brake on?"

The Flagpole

Paddy and Mick were standing at the base of a flagpole, looking up. A blonde walks by and asked them what they were doing. Paddy replied, "We're supposed to be finding the height of this flagpole, but we don't have a ladder." The blonde took out an adjustable spanner from her bag, loosened a few bolts and laid the flagpole down. She got a tape measure out of her pocket, took a few measurements, and announced that it was 18 feet 6 inches. Then she walked off. Mick said to Paddy, "Isn't that just like a blonde! We need the height, and she gives us the damn length!!"