AUGUST 2020

MOOZNEWS

Sedation and Metacam for calves at debudding

Andrew Muir
BVSc BSc (Hons)
Oamaru Veterinary Centre

A large NZ trial published last year looked at the benefit of sedation and Metacam (pain relief) on calves at debudding. The results showed:

- Calves that were given Metacam and sedated along with local anaesthetic grew significantly more in the 7 days after debudding by 144grams/ day compared to calves that were only given local anaesthetic.
- Sedation improved all the behavioural signs and the pain sensitivity measured in the 22 hours after debudding.
- Metacam improved some of the behavioural signs in calves that were only given local anaesthetic.

The effect of Metacam agrees with a large international study summarising 17 trials which showed NSAIDS (ie Metacam) reduces the signs of pain for 6 hours after debudding when used in calves that were given local anaesthetic.

- It is worth considering the use of our Vet Centre debudding teams that use sedation and or Metacam to improve the outcomes of calves at debudding time.

Finally just a reminder that the Animal Welfare laws have changed and all calves must be given an effective local anaesthetic block prior to being debudded. To be able to use local anaesthetic you have to go through an accreditation/ reaccreditation process with one of our vets. Alternatively you can use our debudding service or a debudder that has a VOI to use local.

The Veterinary Centre is looking for debudding assistants to join the Oamaru and Waimate teams – for more information please contact Neil@vet111.co.nz

Preserving colostrum quality

Finja Schmidt BVSc
Waimate Veterinary Centre

At the recent Vet Centre Winter Seminar, Nic Neal (veterinarian and dairy farmer) gave an informative and insightful presentation on calf rearing. Some key highlights on maintaining colostrum quality:

- Measure gold colostrum with Brix refractometer; a **Brix value > 22%** means it's likely enough antibodies are present. It was highlighted that with regular use, it only takes 10 seconds to take a reading on your milk!
- Ensure that milk buckets **stay clean by using lids on buckets.** Bacteria in faeces will immediately start degrading the antibodies in the colostrum. Its's well worth getting in the habit of keeping it clean and being mindful of storage.
- Antibodies in the colostrum will naturally start degrading immediately so **if not using the colostrum within 1 -2 hours then strongly consider the following:**
- **Freezing gold colostrum** i.e. 1.5L soft drink bottles filled with gold colostrum. When defrosting, do it slowly in a water bath.

Nic Neal - presenting at the highly successful Veterinary Centre Winter Dairy Seminar series

- OR if wanting to use in short term, **preserve with potassium sorbate**. DairyNZ has a clear 2-page PDF summary on their website however we also have these resources at our respective clinics should you need them. Again, preserving is very easy to do and will maintain colostrum quality that you've worked so hard to obtain.

If you are unsure on your colostrum quality management, get us to come and take bloods in your calves (<7 days old) and this will help evaluate if your current system is effective before a scours outbreak eventuates!

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OUR CLINICS

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Glenavy Ph 03 689 8118
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Omarama Ph 03 438 9868
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VETERINARY CENTRE

Finja Schmidt BVSc
Waimate Veterinary Centre

Value of doing Day 2 Colostrum bloods at calving

- Gives reassurance and evidence to show that your cows are adjusting well over the transition period.
- May highlight potential problematic areas and target which minerals are involved in your down-cow conundrum. This enables you to make careful and directed changes to your supplementation programme.

What and why do we test?

- At day 2 post calving because this gives the most accurate results and allows for early intervention.
- Calcium and magnesium: very closely inter-related and indicate how well a cow is upregulating her calcium to meet lactational demands.
- Non-esterified fatty acids (NEFA): reflect fat metabolism and whether the cow is in a negative energy balance. When interpreting this along with BCS, this can give valuable information on how the transition feeding has been going.
- Other trace minerals (i.e. selenium, zinc and copper): all involved in maintaining immune function.

What do you need?

- 10x mixed age cows (>3 yo) that are representative of your herd. Unless you have been having problems in your heifers, there's no need to sample these.

If you are having particularly bad problems, it might also be worth doing some bloods in your springers to contrast with your day 2 colostrums. Please touch base with us if you are having issues and we can advise what will help give the most information. Sarah and Heather will be in touch with those clients that expressed interest from the RVMs.

Feed Testing and Analysis

Lucy Cameron BVSc BSc

Managing the spring and colostrum period can be quite complex. Many aspects of the diet need to be considered i.e. energy, protein, fibre, magnesium, potassium, calcium, phosphorus and sodium among others. This can be overwhelming and if done incorrectly, it can have disastrous repercussions. A simple solution is getting a feed test done and this takes the guesswork out of it.

To get your pasture or silage tested, bring in a fresh representative sample from the paddock/stack. A full bread bag is about the right amount, which you need to bring in straight away.

- For a pasture sample, grab handfuls of grass down to post-grazing level from several clean areas throughout the paddock
- For a silage sample, a cored sample is ideal, otherwise dig in a bit so it's not from the open face

Once we have the results, we can run your proposed diet through a feed analysis programme. Adjustments can be made, for example:

- Ensure the right amount of energy is being fed – feeding too much can increase the risk of metabolic disease, or if too little, cow health post-calving can suffer. At this time of year, a typical pasture could range from 11.0 up to 12.5 MJ ME. This variability could significantly affect your feed budget. Silage quality can also vary widely.
- Mineral balance in the diet is crucial over transition – e.g. high potassium levels in pasture or silage can interfere with magnesium absorption, increasing the risk of milk fever. Some paddocks on your farm can have up to half the amount of potassium than others.

Dr Jim Gibbs, BSc (Hons 1), BSc, PhD, MACVSc. L(incoln University) – Presenting at the Veterinary Centre Winter Dairy Seminar series on Transition Management

Heifers on Fodder Beet

Over the years I have condition scored a huge number of R2 heifers that have wintered on FB. Most of these animals have done very well in achieving industry target BCS by calving.

Heifers between 18-24 months of age are erupting the first two permanent middle incisors. As such they have a temporary compromise in their ability to bite into a FB bulb (compared with adult cattle). When you watch them eat FB, their technique is quite different from an adult cow. They tend to shave the beet with their teeth (like a cheese grater), rather than bite chunks from it. On a hillside this technique often results in the beets being dislodged and rolling to the bottom. Once the beet is no longer fixed to the ground many heifers struggle to achieve high intakes. When planning FB planting for heifers ensure you choose flat ground, a low DM cultivar and supporting high quality long fibre supplement.

Lice Control Around Calving

Products you might consider -

- Blaze Pour On (lice only) - Nil milk, 28 days Meat, Nil bobby Calf - ($2/500kg cow dose)
- Cydectin Pour On (lice and worms) - Nil Milk, Nil Meat, Nil Bobby Calf - ($4.70/500kg cow dose)
- Genesis Pour on (lice and worms)- Nil Milk, 35 days meat, 16 days bobby calf. ($2/500kg cow dose)
- Destruct Pour On (lice only) - 5 days Milk, 3 days meat (including bobby calves). ($2/500kg cow dose)

Discussion

Effective autumn worm control with correct timing in your dairy herd is usually adequate for seasonal lice control. If a lice problem develops within your herd around calving time you may consider one of the above product options. Whilst Genesis contains the most effective active ingredient for lice control, if you do use it you have to manage the bobby calf withholding time. Our vets are available to discuss the options with you.

Luke Smyth BVSc.
Oamaru Veterinary Centre

Downer Cows

Every dairy farm will experience some metabolic downer cow cases this spring and most are a relatively quick fix with metabolic treatment and up within a few hours.
But a significant number stay down for long periods. Any cow which has been down for over 24 hours requires good nursing to ensure a full recovery but this can be very labour intensive and time consuming.
It is important to understand that these cows are often not down due to the primary condition (i.e. milk fever) but are down due to secondary complications such as muscle injuries, nerve damage and compartment syndrome. This damage can occur within as little as 3 to 6 hours of going down especially if the surface is hard and/or the animal is heavy. So a cow needs to be got back on her feet quickly or managed appropriately to prevent this secondary damage.
Nursing of a downer cow should only be undertaken if the cow has a reasonable chance of recovery and a competent person is on hand, who is prepared to invest the time and energy in the care of the cow. This is an important animal welfare message. If you are unable or unwilling to provide a high level of care then euthanasia should be elected early in the piece.
Inadequate care of down cows is one of the most common animal welfare complaints from members of the public.
Research has shown that over 45% of downer cows can recover with good nursing, while 0% of cows will recover if very poor nursing is given!

- Ideally the down cow is sheltered and on clean, dry and soft bedding. Normally this means putting her in a calf shed. While the majority of down cows are nursed in the paddock, this is not ideal and she should at least have a cow cover put on her.
- Clean water and good feed should always be available. A cow should drink 40 litres a day and have at least 12-15kg of DM. A 1 litre bottle of Calstart or Headstart is equivalent to a kg DM.
- Longer acting anti-inflammatories such as Metacam and Rimadyl will definitely improve cow comfort and prognosis.
- Move the cow from side to side every 3 hours to ensure her weight is not always to one side and flex and extend the hind limbs each time the cow is moved
- Regularly milk the udder out by hand stripping, check she is not developing mastitis.
- Encourage the cow to rise, use hip clamps to get her to her feet only, never leave cows hanging in hip clamps.
- Regularly re-assess her progress and diagnosis. If you have any doubts ask for help.

Culled Cows Report – Dairy Diary Requirement

Several farmers have contacted us recently about getting a 'Culled cows report' for their Dairy Diary. This is available on MINDA Pro but not MINDA Live. If you have moved over to the Live system and require a report let us know and we can produce a preformatted report from Infovet, which stipulates the reason (death or cull) for removal from herd.

Multimin Injection

Recent NZ Dairy Calf Research (Bates, A.J, et al, 2018)*

- From a study on 1000 calves from 4 large Canterbury dairy farms
- 1ml dose in Dairy Calves less than 1 week old
- 52% Reduction in Disease
- 58% Reduction in Deaths

Product Details

- 4 trace elements in 1 injection
- Copper/Selenium/Zinc/Manganese
- Rapidly Absorbed - into blood (8 hours) and liver (24 hours)
- 1 x 500ml pack contains 500 x 1ml calf doses.

Recommendations from Neil Chesterton

Euan Tait BVMS,
Waimate Veterinary Centre

Earlier this month, we were very lucky to have Neil Chesterton BVSc as one of the guest speakers at our annual Winter Dairy Seminar. The wealth of knowledge Neil brought was second to none and that was highlighted during our various farm visits with him.
These visits comprised of very different scenarios including how to increase herd numbers without increasing pressure and lameness, cow flow problems and addressing on going lameness issues. A few of Neil's observations and solutions to potential pitfalls are listed below –

- Backing gate use – don't move the backing gate within the first 20 minutes of milking and only move small distances at a time
- Entry and exit on to platform (rotary) – entry only needs to be around 900mm wide, and exit should ideally be 3 bails wide to prevent excess pressure on feet
- Foot baths – ideally these should be permanent structures that can be emptied and refilled – this allows cows to become used to them and when needed they flow smoothly through, stepping through it rather than jumping
- Tracks – structure, width, camber and maintenance are all very important in lameness reduction and prevention e.g. no crusher dust within 300m of collecting yard
- Breast rail height (herringbone) – changes from 800mm high to only 740mm can make big improvements in cow comfort during milking (by reducing pressure on point of the shoulder) and therefore improve cow flow

Neil Chesterton at Veterinary Centre Winter Dairy Seminar

Some simple changes in management and potentially shed structure can have very positive outcomes in reducing cow flow issues and lameness. Within the practice we have 5 vets trained in the "Healthy Hoof" program - a course led by Neil and Dairy NZ – who are happy to help should a lameness issue arise on your farm.

Hamish Newton BVSc, PhD
Oamaru Veterinary Centre

Uddernews

Simple things for a busy time

Milk is going to the factory on many farms now. Are systems in place and understood by everyone milking the cows to make sure that antibiotic milk does not get into the vat? Simple systems that everyone understands are vital, for example does everyone know…

- How is a cow that is in the colostrum herd identified? A "dot a day", or a series of stripes on the legs etc.
- If a cow gets mastitis (or any other treatment with a withhold) how is she Marked, Recorded, and Separated, before being Treated (MRS T)?

Are you RMT or paddle testing every cow before she leaves the colostrum herd? Not every RMT positive cow will need treating, so put a dot on her and check her tomorrow – most will pass but those that do not consider treating.

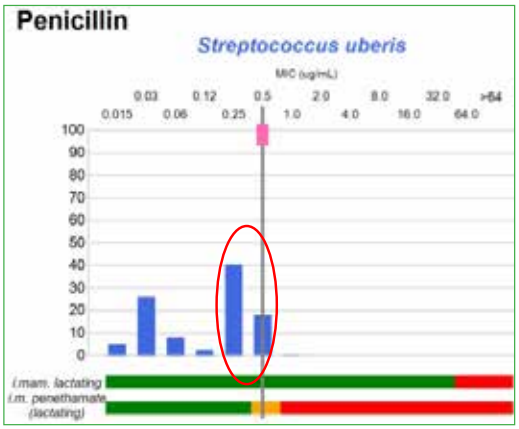
Is the teatspray getting on to the teats? Do all your milkers appreciate how important this is, or have you checked the automatic teatsprayer is working as well as it can?

Inhibitory Substance Testing

If you suspect that an antibiotic treated cow has been milked into the vat, inside her milk withhold period, remember we can detect all of the dry cow products and most mastitis treatment drugs at the Oamaru clinic. Ring 0800 838 111 and tell us you are coming in with a sample of milk so we can get the testing equipment prepared and warmed up. Before you take the sample from the vat make sure the vat is well agitated/stirred, then discard the milk in the outlet pipe as this milk often does not get mixed. Then bring us in a sample of milk in a clean jar. Approximately 100ml is enough.

Treating multiple quarter mastitis

With the new prescribing rules, most of you, will no longer have access to products containing tylosin (Tylan, Tylofen etc.). If you elect to use an injectable antibiotic for heifers in the colostrum period or multiple quarter mastitis the options available are effectively limited to products containing penethemate (Mamyzin or Penetheject). If your antibiogram shows that your farms bugs are "a bit hard to kill with penicillin" (if your line is to the right of the graph) then consider using 10grams followed by 5grams (big bottle of mamyzin followed by a small bottle, or 40ml followed by 20ml of penetheject) rather than 5g three times.



Jasper Meek BVSc
Oamaru Veterinary Centre

Failure of Passive Transfer in New-born Calves

We all know the importance of getting good quality (gold) colostrum into calves as soon as possible after birth, but what happens when we don't? Antibodies, also known as immunoglobulins or IgG, are at their highest concentration in the **first milking colostrum**. Antibodies are only absorbed from the gut into the bloodstream within the first 12hours. When calves do not receive enough good quality colostrum over this period, antibody levels in the bloodstream of the calf will remain low and we call this failure of passive transfer (FPT).

Antibodies are a critical part of the immune response which act by recognizing specific antigens, such as bacteria or viruses, and aiding in their destruction. Although antibodies in colostrum continue to provide local immunity in the gut, this is easily overcome in times of stress and high challenge. Without sufficient antibodies in the bloodstream, calves are at an increased risk of disease and outbreaks are inevitable.

As a rule of thumb, calves should be fed **2L within 6hours of birth and 4L or 10% of bodyweight within 12hours of birth**. Refractometers can be used as a tool for measuring the quality of colostrum to determine whether it is suitable to feed in this critical 12hr period. A Brix reading of 22% or greater is recommended. Contact your Blue Cross Veterinarian for more information.

How do we test for FPT?

The total protein in the serum of calves correlates closely to antibody levels. To test this we need to blood test **10 randomly selected healthy calves between 2-7days old.**

Who should test for FPT?

1. Anyone having issues with calf scours this season.
2. Anyone who has had issues with calf scours in previous seasons.
3. Anyone wanting to ensure they are making the most of any pre-calving vaccines such as Rotavec and ScourGuard. Antibodies produced from these vaccines go into the first milking colostrum so are essentially wasted if calves have FPT.

If interested, get in touch to organise a visit for us to come out and test some calves for FPT. If you have any questions, contact myself or one of the other vets.

Refractometer for measuring Brix of Colostrum

Blind Quarters in Heifers

Every teat sealing season we find heifers with blind quarters (i.e. a tube cannot be inserted). In some instances, a tube can be inserted but there is still blocking tissue at the top of the inside of the teat. No one knows the true cause of this, but one hypothesis is that they arise from calves teat sucking. We would like to record the lifetime IDs of calves that are seen to be sucked and follow these through. If you would like to help, please contact Mat at Veterinary Centre Oamaru.

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Mat O'Sullivan BVSc
Oamaru Veterinary Centre

Transition Cows Management

Getting it right in the transition period (2-3 weeks pre and post calving), is critical for the reduction of metabolic disease, improved early lactation appetite, the control of condition loss, increased production and subsequent reproductive performance.

1) OAD milking in the Colostrum period (and beyond)

OAD milking will positively alter the energy balance of the cow. Cows milked OAD are less likely to mobilise excessive condition. Cows will be in better immune status and recover from metritis and mastitis faster. The egg development in the ovaries are of higher quality leading to better fertility. Ensure milk withholds are complied with as instructed.

Tip – collect freshly calved cows from springers TAD and milk within 12 hrs of birth. The second milking should occur 24-36hrs later – i.e. in the mornings. Cows should stay on OAD until "the belly is wider than the udder", indicating they are eating well. Poor condition heifers will benefit from remaining on OAD milking right up until early Dec. There will be little production loss if mature cows are milked OAD for the first 3-4 weeks of lactation. Over conditioned cows and poor condition cows will equally benefit.

2) Improve Calcium Status and Supplementation

Providing cows with magnesium and calcium anionic salts as springers will reduce much of the milk-fever risk, but also take away a lot of the subclinical issues that most cows experience on the 1st day of calving. Getting it right will reduce mastitis and increase DM intakes.

Tip – use transition mixes containing CaS, MagS, MagCl and CaCl, for approx. 10-15 days pre-calving. Discuss quantities with your Prime Vet. Effective Ready-made Transition Cow pre-mixes are available at ~40c/cow/day, these can be ordered through the Vet Centre.

Providing additional Ca on the day of calving may further improve the results. This is best given to the cow by either a Calcium Bolus (which have become very popular as they are the most effective), or a starter drench, oral Calol (Bovaseal Pearls) or a Ca bag under the skin.

Tip – give this at the first milking within 12 hrs of calving. Greatest benefits will be seen in cows of 4-5 years of age and greater.

3) Fibre to keep the rumen in top condition and reduce energy content of diet

Diets which are low in volume or fibre (e.g. FB) may result in the rumen muscles getting out of condition.

Tip - Feed up to 5kg of straw or hay to springers to maintain rumen muscle fitness and to dilute the energy density of the springer diet.

4) Rumen microbial adaption

It takes 7-10 days for rumen microbes to change from one diet to the next. Rumen fermentation needs to at its peak efficiency at the time the cow calves

Tip – Make sure that springers cows are exposed to the feed that will be offered as colostrums and milkers. This may mean that they are back on grass and also get some grain in the shed, silage or PKE starting 7-10 days before calving. They do not necessarily need to be taken completely off crop (although best not to feed more than 2-3kg of FB to springers). Feeding Rumensin will increase feed conversion efficiency by more rapidly selecting beneficial bacteria.

5) Protein

In late gestation the foetus is rapidly growing, the mammary gland is regenerating, and large volumes of colostrum antibodies must be produced. Springer cows (from 3-4 weeks pre-calve have an increased protein requirement. Deficient cows have compromised immune function and production.

Tip – cows within 7-10 days of calving need ~2.0 kg of Crude Protein per day. For a springer eating 14kgDM, this would be a total dietary crude protein of 15-16%. Soya, canola, peas, DDG and Italian ryegrass are a good source of additional protein. FB, straw and cereal balages are very poor.

6) Springer Energy Intakes

For the last five years the industry recommendation has been to slightly restrict intakes of springer cows. The benefit of doing this was to prepare the liver for post-calving fat metabolism and reduce milk fever.

Tip – springer cows should ideally be eating 2.8% of their body weight daily. (min 2.5% - max 3.1%). Within this DM allocation aim for 500kg cows to be getting 110-120MJME/day down the throat (90-95% of total requirements).

7) Trace Minerals

Make sure that cow Trace mineral status is adequate at calving. The big three to ensure good immune function are Selenium, Copper and Zinc.

Tip – most farmers provide cows with short acting selenium as springer cows return home, consider extending this to the highly researched Multimin injection which provides all three for extra coverage.

8) Early Calf Removal

Removing the calf within 12 hours ensures that cow bonding is reduced, and cows are less likely to 'pine' at the gate. The risk of mastitis is significantly reduced by shortening the suckling period and the colostrum when harvested within 12 hours will be far superior to a cow that has been calved 24hrs.

Tip – use the fact that you are milking the main colostrum mob just OAD to free up time for TAD calf and cow pick up. Graze colostrum cows from the back of the paddock to the front so they are not hanging out at the gateway.

VETERINARY CENTRE

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Jess McKenzie BVSc
Veterinary Centre Waimate

Bobby Calf Welfare

Animal welfare is at the heart of any good farming business. All calves, regardless of their purpose, should be treated with care and respect. Bobby calf welfare is important – the following guidelines will help you meet the welfare needs of animals in your care and to comply with the requirements of the Animal Welfare Act 1999:

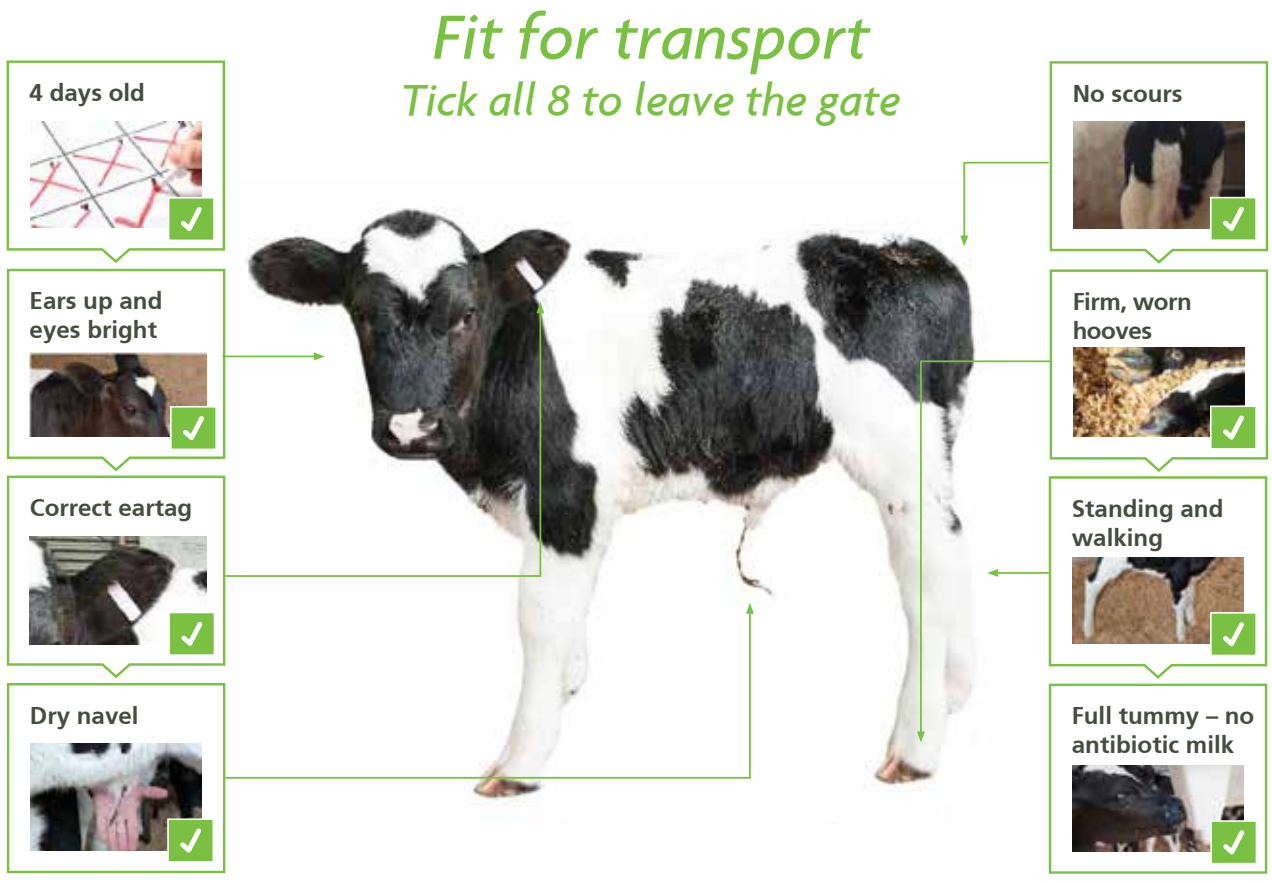
- **Colostrum** – bobby calves must be fed colostrum (10% bodyweight minimum) within the first 12 hours of life. Good quality colostrum should be fed twice daily for the first 4 days of life.
- **Handling** – handle calves gently and with care at all times.
- **Housing** – bobby calves should be moved to a sheltered, draught-free calf shed with comfortable bedding as soon as practicable after birth.
- **Water** – calves must have free access to clean, fresh water at all times.
- **Age** – calves must be a minimum of four days old before transporting them.

How do I know if my calves are fit for transport?

In addition to being a minimum of four days old before transport, the following signs will indicate if a calf is fit for transport:

- **Healthy** – eyes are bright, not dull or sunken. Ears are upright. No signs of visible disease (eg. scours), deformity, injury, blindness or disability.
- **Strong** – able to bear weight on all four legs. Be strong, able to rise unassisted and move freely around the pen.
- **Hooves** – firm and worn, not rounded and soft.
- **Navel** – dry and withered, not pink/red, raw or fleshy.
- **Fed** – at least ½ the days ration of colostrum no more than 2 hours prior to collection, or as per your supply contract.

Slow and unsteady calves, those with a wet navel, concave (sunken stomach) or scours are unfit for transport and should not be presented. Truck drivers are not permitted to load unfit calves.



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