Animal health advice and livestock disease investigation services

As made clear by the Federal Minister of Agriculture and NSW Minister of Primary Industries, agricultural operations need to continue unabated as essential services. Local Land Services (LLS) provides various biosecurity services, including livestock disease investigation and pest animal control, to support agriculture and ensure food safety and security. These services will continue as normal.

Changed customer service arrangements at LLS offices

However, our customer service arrangements in our offices have necessarily changed in order to comply with the mandatory measures now in place to slow the spread of the coronavirus. Many LLS staff are now working from home, with skeleton staffing levels in our offices. Clients may now only attend our offices by appointment. This arrangement will have limited impact on LLS animal health services. It merely means that clients should contact us by phone for animal health advice or to arrange a disease investigation, rather than dropping in at one of our offices. We can certainly still conduct our livestock work on farm while maintaining social distancing and hygiene rules.

Livestock owners should order NLIS ear tags well in advance

Livestock owners are strongly encouraged to ensure that they have adequate supplies of NLIS ear tags on hand to enable them to legally sell or move cattle, sheep, goats or pigs in the coming months, as the closure of our normal office front desk customer service arrangements means that you can’t just drop in and buy a few emergency NLIS ear tags if you find yourself a few short when you yard your cattle.

Livestock owners should check their stocks of NLIS ear tags now and place orders as soon as possible with their preferred rural produce store to ensure there are no obstructions to planned sales or movements in the coming months.

Covid 19 virus and animals?

Here is the advice from the NSW Health website, which reflects the information on the World Health Organisation (WHO) website:

www.who.int/news-room/q-a-detail/q-a-coronaviruses

Attention: If moving horses and you need a TSS from an LLS office please ensure adequate time to collect this document.
Pets and animals

Can pets be infected with COVID-19?

While COVID-19 seems to have emerged from an animal source, it is now mainly spreading from person-to-person. There is no reason to think that any animals including pets in Australia might be a source of infection with this new virus. There have been no reports of pets or other animals becoming sick with COVID-19 in Australia.

There is also no evidence that companion animals including pets can spread COVID-19. However, since animals can spread other diseases to people, it’s always a good idea to wash your hands after being around animals.

Animal welfare during the Covid 19 pandemic

The NSW DPI website (www.dpi.nsw.gov.au/home/covid-19) carries the following advice:

During uncertain times it is important that animal owners and carers take appropriate steps to ensure the continued welfare of their animals.

All animal owners and carers, including those responsible for animal holding facilities, exhibitors, researchers, primary producers, saleyard & processing facility operators and animal transporters are responsible for ensuring animal welfare standards are maintained.

If you own or care for animals, it is important to plan ahead and consider a range of factors that will reduce the risk of animal welfare issues that may occur during a human health pandemic.

MANAGEMENT OF SALEYARDS DURING THE COVID-19 PANDEMIC

The Australian Livestock Industry is very aware of the major health concerns of Covid-19, but also needs to maintain the food supply during this difficult time.

Management of the Saleyards has changed in order to decrease the risk of human exposure to Covid-19.

Attendance at the Saleyards must now be restricted!

Currently the personnel required at the Saleyards are limited to essential Saleyard staff, accredited livestock agents, essential agency staff, genuine buyers with a true intention to purchase stock and Government Biosecurity Staff.

There are on-ground systems and protocols put into place in order to manage attendance at the Saleyards:

1. Those authorised to enter must sign in and sanitise hands onto and off the facility
2. Leave the Saleyards as soon as their business has concluded
3. Maintain 1.5m social distancing always: the sale cannot commence if social distancing is not satisfactory
4. Transporters of livestock can unload and load cattle but not allowed at the sale
5. Those allowed at the sale include genuine buyers, accredited agency staff, saleyard site staff, essential agency staff and Government Biosecurity staff.
6. Hygiene facilities will be provided
7. Any Saleyard canteens can only provide takeaway
8. Move on (away from pen that is being sold) if you are not bidding on a pen of cattle to allow those that are bidding easier access.
9. Online auctions and livestreaming are other available options
10. No one should enter a Saleyard with respiratory symptoms.

All Saleyards will have slightly different systems due to operation layout and available facilities. Please discuss any concerns with your Saleyard staff and livestock agents.
FIT TO LOAD, FIT FOR SALE AND FIT FOR THE TRIP

Over the last month we have seen multiple cases of active pink eye in cattle at different saleyards across the Hunter. The owner of the cattle has a General Biosecurity Duty not to send such highly infectious cattle to saleyards, where transmission of the infection by flies to cattle in surrounding pens is highly likely. Failure to discharge one’s General Biosecurity duty is an offence under the Biosecurity Act 2015 (Part 3, Section 23). These producers also contravene the ‘Fit to Load” guidelines and may be liable for prosecution. The producer also has a duty of care to ensure the welfare of livestock under their control and reduce the risk to their welfare.

A transporter of livestock is responsible for the final loading inspection and should not load and transport any animal that is not fit for the intended journey.

Included below is the link for the National guide to the pre-transport selection and management of livestock as a reference.

To download the guide or to order a hard copy, visit: mla.com.au/isitfittoload.

Please remember that there are particular welfare and NLIS considerations for transport and sale of young calves.

- They must be over five days of age
- Bright, alert and actively mobile
- Fed milk in the last six hours
- Have an NLIS tag, and accompanied by a specific Bobby Calf NVD.
NLIS PIGS: SELLING OR GIVING AWAY PIGS

Traceability is crucial to prevent the uncontrolled spread of exotic disease and to maintain market access.

With African Swine Fever a very real threat to Australia and our pork industry and with positive cases recently confirmed in Bali and Papua New Guinea, it is of utmost importance that all pigs are able to be traced back to where they have come from.

The National Livestock Identification System (NLIS) is a mob-based tracing system for ALL pigs, even pet pigs. It has four parts:

1. **A Property Identification Code (PIC)**
2. **Identification** of pigs using either registered swine brands or NLIS accredited eartags linked to a PIC
3. Movement documents (PigPass NVD)
4. Reporting the movements on the PigPass database

To **Sell (or give away) Pigs** either to an abattoir, through a saleyard or direct to another producer you must:

- Have a PIC
- Have a registered swine brand or eartags linked to your PIC (pigs less than 25kg must only be identified with an eartag and must not be branded in NSW)
- Ensure all pigs have an NLIS eartag or swine brand
- Be registered for PigPass (www.pigpass.com.au/register)
- Complete a PigPass National Vendor Declaration (NVD) which accompanies the pigs
- Keep a record of the PigPass NVD for three years

To **Purchase (or receive) Pigs** you must:

- Have a PIC
- Provide your PIC to the seller
- Be registered with PigPass so you can record movements onto your property within two days
- Keep a record of the PigPass NVD for three years

If you need a PIC, apply to your Local Land Services (LLS) to obtain a PIC for your property. Call LLS on 1300 795 299

NLIS accredited ear tags are either yellow or orange in colour and are printed with the property’s unique PIC, the NLIS logo and a “P” inside a circle. **Breeder tags** are yellow and must only be attached to pigs bred on the same property as the PIC on the ear tag. **Post-breeder tags** are orange and are used on pigs that were born on a different property. The PIC on the tag must belong to the property on which the pigs are being tagged. More than one post-breeder tag may be attached to a pig, as a different tag is attached each time the pigs moves from a different property (PIC).

We also want to let all our pig producers know that the only abattoirs in NSW that currently accept pig are Booyong Pork Processing, near Ballina and Wollondilly Abattoir in Picton.

If you are a pig owner and want to be added to our mailing list to receive updated information regularly, please contact your Local Land Services Office on 1300 795 299 and ask to be added to the list.
WHY DO HORSE OWNERS NEED A PIC?

Hunter Local Land Services is reminding all horse owners they need to have a Property Identification Code (PIC) and should have a Transported Stock Statement (TSS) if they are moving horses in NSW.

Transported Stock Statements and PIC numbers are important biosecurity measures and are critical for monitoring and reporting outbreaks of viruses such as Equine Influenza.

It is a legal requirement to have a PIC number, and equine organisations and event coordinators are enforcing this at local events.

Ignorance is not acceptable, if a sick horse attends a local event, we need to be able to trace where it came from, and stop any disease outbreaks at the source.

We are seeing increasing numbers of people contacting us wondering what it is all about – this is not a new regulation and horse owners must comply, even if you only own a pony for the kids. Even if your horse never leaves your property, you are still required to have a PIC.

Registering for a PIC is a simple process, undertaken by contacting Local Land Services, it can usually be arranged in under 24 hours.

Transported Stock Statements are available individually or in booklets from Local Land Services.

You are required to have a TSS on hand for all horse movements, unless you have:

- horses being transported to or from any agricultural show, exhibition, gymkhana, pony club meeting or similar function,
- racehorses or harness racing horses being transported from one place to another,
- horses being transported to or from any place for use as working horses,
- horses being transported to and from a place for veterinary treatment.

Authorities may stop your vehicle and request to see your statement at any time.

PIC numbers and Transport statements are crucial to maintaining Australia’s enviable disease free status for so many dreadful viruses.

Please help ensure the health of your livestock and pets, by adhering to the regulations and doing your bit to maintain these systems.

Our team at Hunter Local Land Services can set you up with a PIC quickly, and this will make it much easier for you to take your horse or pony to local events, and can also be crucial in an emergency such as fire or flood, so we know where animals that may need evacuating are located.

If you need to enquire about obtaining a PIC number or Travelling Stock Statement booklet, please call 1300 795 299.
How to Manage Cattle affected by Three Day Sickness

Bovine Ephemeral Fever (BEF = ‘three day sickness’) is currently circulating in Mosquitos and is affecting cattle in the Hunter LLS area. The virus was confirmed on the Mid Coast in March and we expect to see cases in the Hunter for the next few months.

We encourage all cattle producers to step up monitoring of their herd to identify affected cattle and be prepared to treat and nurse animals.

Whilst three day sickness is relatively common on the coast, frequently occurring in late summer or autumn, we have had very little virus transmission during the previous two to three years of drought. Producers should be prepared that any cattle born on or introduced to the coast particularly after autumn 2017 (last period of BEF transmission) could be affected by three day sickness until mosquitos disappear with cold weather.

Cattle older than about four years, that were born on the coast, most likely have been infected before and probably have good immunity.

Daily monitoring of your herd is particularly important during this time to ensure you identify any affected cattle and provide timely and suitable treatment and/or nursing care.

BEF causes a short but significant fever, drooling, shivering, a discharge from eyes and nose, lameness and muscular soreness. Animals may become recumbent for a day or two. For the most part, BEF is a mild transient illness hence the name ‘three day sickness’. But some animals can be more significantly affected and cattle deaths can result. Thus the disease and the need to manage cases shouldn’t be underestimated.

In particular heavy animals such as bulls and big cows may be most severely affected. A transient infertility in bulls can occur and a small proportion of pregnant cows can abort, presumably from the high fever.

Early veterinary treatment can mediate these impacts and prevent animals from becoming recumbent. Good nursing care can be the difference between affected cattle recovering in the normal three-day window or succumbing to secondary health effects from dehydration, particularly in hot weather, or sustained recumbency.

The following may assist your on-farm management plan.

Monitoring Cases on Farm

- Inspect cattle daily particularly if three-four years of age or younger or have been introduced to the region after about April/May 2017.
- Seek advice from your private vet if you are unsure if your cattle are suffering from Three Day Sickness or another illness mimicking the signs of three day sickness.
- Diagnosis is either on clinical signs or blood test. However, BEF can be difficult to confirm via blood test as cattle clear the virus very quickly. Blood needs to be sampled as soon as the animal looks sick to get a positive result (i.e. within the first 24-36 hours of illness). Veterinarians are skilled at identifying the clinical signs of BEF and diagnosing on this basis. In a few situations however it may be useful to test animals to obtain a diagnosis if clinical signs are inconsistent.

Managing cases on Farm

Nursing care is very important for any cattle that are down or relatively immobile. The virus causes considerable inflammation and pain in muscles and joints and cattle may become recumbent or stop moving. This can prevent access to water, food and shade. They may also have trouble swallowing as the virus can paralyse the pharynx hence they often dribble saliva. To mediate the effects of the disease please;

- Shade affected animals from the hot sun
- Provide a large tub of cool fresh water within easy reach of immobile cattle. Make sure the tub is stable, has low sides for easy access and can't be easily knocked over and is full at all times. Shade and water are both essential to prevent dehydration.
- Provide good quality food such as lucerne hay as recovery from illness requires good nutrition.
- If cattle are immobile in a paddock you may have to erect a temporary fence to protect their food and water supply from the unsympathetic access of their paddocks mates. Otherwise lifting the animal to a safe and protected spot or shed with soft bedding is worthwhile.
- Lift and roll recumbent cattle at least one-two times a day to prevent secondary nerve and muscle compression, if they have been down more than a day or so.
- Speak to your private vet about the suitability of injectable anti-inflammatory medication to mediate fever and muscle inflammation.
- In addition, having a couple of flopaks of a 4in1 calcium supplement (available from your vet or produce store) on hand for injection under the skin of down cattle can help with muscle function. The action of the virus depletes
calcium from the animal and if cattle cease eating calcium levels can also fall. An injection of calcium can just be the added help they need to get up or stay up right.

- Injections of anti-inflammatory medication or calcium needs to be administered early in the course of the illness to be effective.
- While affected cattle will benefit from anti-inflammatory and/or calcium injection it becomes a practical consideration how you can effectively administer the medication. If they are recumbent in the paddock and can be safely treated whilst down that is one option. However, moving sore animals to yards albeit very slowly is unpleasant and may be difficult to justify. This has to be assessed on a case by case basis, how far to the yards, ambient temperature, cattle demeanour etc.
- These steps may be warranted particularly in larger and valuable cattle, bulls and pregnant cows.
- Insect protection (pour-on or rub on backline treatments) might also be of assistance in protecting cattle from being bitten by mosquitos and reducing the viral load that cattle receive.

In a very small percentage (1%) of infected cattle the virus lodges in the nervous system and these animals might never regain the ability to stand or walk. Thus seek veterinary advice for animals that remain recumbent after five-seven days despite good nursing care as outlined above.

Mosquitos carrying the virus have also made their way to some inland areas of NSW that haven’t had virus distribution for more than 10 years. Thus many areas of the state are experiencing issues with BEF.


Human Health Reminder protect yourself from Mosquitos

Mosquito numbers are very high and NSW health is issuing reminders that mosquitos can also carry viruses that infect people such as Ross River Virus and Barmah Forest Virus.

Up and down the coast Mosquito trapping sites have returned high, very high to extreme mosquito numbers. Thus producers are reminded to protect themselves from mosquito bites when on the farm and generally out and about, particularly in the morning and afternoon.


**ALERT TO CATTLE PRODUCERS:**

There have been a number of unusual cases since 8 April on properties where BEF has been spreading for several weeks. On these properties classic signs of BEF have been observed (drooling, fever, soreness, lameness and recumbency), but there have been additional cases where respiratory signs have been observed without lameness or recumbency (loud, heavy breathing, sometimes with head and neck extended, gasping for breath, and sometimes death). Although we are still waiting for laboratory tests to confirm that these cases are caused by the BEF virus, these signs have been previously reported as an uncommon presentation of BEF. These animals suffer severe emphysema of the lungs, and air that escapes the damaged lungs moves away into other tissues and out under the animal's hide. i.e. air can be felt under the skin of the flanks and loins in some of these animals. Please report such cases to your private vet for treatment.
BUFFALO FLY IN THE HUNTER

For some weeks Buffalo Flies have been irritating cattle our MidCoast district, with reports they have moved into the Lower Hunter. The Buffalo Fly is a very small fly approximately 4mm in length with pointed wings along its back, and a grey body that has two stripes down its thorax. They have a long proboscis mouth part that penetrates the hide of cattle, sucking blood and causing irritation. The consequences of this immense irritation is hide damage, decreased weight gains and milk yield and sores over the shoulders and flank regions.

The typical Buffalo Fly season starts around November and normally finishes around May, with fly problems being much worse up North in QLD and Northern NSW. The Buffalo fly is more attracted to bulls and dark coated cattle.

There are a variety of methods to control Buffalo Fly including fly traps, establishing dung beetle populations to break down the manure piles that buffalo flies breed in, chemical controls, and culling cattle that appear to be allergic to Buffalo Fly. It is important to try and delay the use of chemicals until the fly numbers are >200/beef cattle or >30/ dairy cattle. There is always a concern of residues with any chemical so watch the withholding periods on each chemical and correctly apply the chemical in order to prevent resistance occurring. Chemicals can be applied to the animal on back rubbers (self-applicator), sprays and pour-ons and ear tags.

Producers are often unsure which chemical control method is best to use. Insecticidal ear-tags might seem expensive at first glance, but their duration of activity is greater than for pour-on treatments, reducing the need for repeated yarding of cattle. In order to gain the most benefit from long-acting insecticidal ear-tags, it is important to look at the duration of the fly season and predict how long you could require treatment for.

Regardless of which application method you choose (back-rubber, pour-on or ear-tag), it is good practice to rotate the chemical family that you use in order to prevent resistance developing. Choice of chemical might also be influenced by the fact that some of the chemical treatments for buffalo fly can also have an unwanted adverse effect on dung beetles, making non-chemical fly control methods such as fly traps an attractive option. Given that the fly season appears to have kicked off in the region in November we may be in for a long fly season this year so please don’t hesitate to call your local District veterinarian if you have any questions with regards to Buffalo Fly.

Detailed information brochures on buffalo fly control can be accessed at the following MLA and NSW DPI websites:

https://www.mla.com.au/CustomControls/PaymentGateway/ViewFile.aspx?co4Y6oDDU7HwRLRFUnQItcN/

PREPARATIONS FOR WINTER: FEED AVAILABILITY UPDATE

Livestock Officer Teresa Hogan’s advice:

Covid-19 has caused significant uncertainty to our grain market, the exact extent of the impact the virus will have on the industry is largely unknown and so we will need to continue to monitor. There has been a spike in global grain prices as ‘panic buying’ is occurring and early reports of countries stock piling- no concrete evidence out there as yet.

Hay/silage prices are changing weekly, mostly tending cheaper as demand has decreased. As we move into winter I envisage this coming back up whilst people prepare for the winter feed gap.

Milled feeds, pellets and protein meals have remained consistently high priced and I doubt that will change any time soon, only that availability has increased due to lack of demand.

Recent rainfall has eased the need for supplementary feeding and I am advising cautious optimism moving forward, it is likely some form of supplementary feeding will again be required soon enough.

Livestock markets have run cheaper in the last week (price has still remained strong), but demand is still there for livestock-likely Covid-19 will impact things more significantly in the weeks to come. Hunter LLS Officer Teresa Hogan prepares a regular feed availability update, please contact teresa.hogan@lls.nsw.gov.au to be added to the list.
THEILERIA

With the warm, wet weather recently, there has been an increase in parasite numbers, including ticks. In much of the Hunter and Mid Coast region, the common bush tick carries a protozoan parasite called theileria which can cause disease in cattle. Affected calves may be found to be lethargic, listless, inappetant or recumbent, often with pale or yellow gums.

When ticks carrying Theileria feed on cattle, the parasite gets into their bloodstream and enters red blood cells. If enough red blood cells are destroyed, this causes anaemia and reduces the ability of the blood to carry oxygen, which makes the animal unwell, pale and weak (anaemic). Affected cattle may even die.

Lice, mosquitoes, biting flies and use of a common needle and syringe may also play a role in spreading the disease. Blood contamination of tattoo guns and ear notching equipment can also transmit the disease. However, the bush tick is the definitive host and is the main source of theileria infection.

Ticks are generally found along the entire coast but also extend into the tablelands, with exact distribution being unpredictable, varying with climate and the seasonal conditions of the particular year. Outbreaks of tick-borne disease like theileriosis are more likely when conditions favour tick survival. Stress, drought, illness and pregnancy can all exacerbate the impact of the disease.

Theileriosis is endemic in the coastal districts of the Hunter Local Land Services Region. Cattle bred in these districts are generally exposed as calves, and are immune to theileria by six months of age. Calf losses do occur on some properties, most commonly between 6 and 12 weeks of age.

Disease is seen in adults when they are moved from a district where the parasite is not present to districts where Theileria is common (typically interstate or inland cattle moved to coastal districts). Theileria occurs sporadically in the Upper Hunter. The further you move up the valley from the coast, the less likely it is that the cattle are immune. Cattle introduced into coastal districts from areas further west are at risk of theileriosis.

Spring seems to be a particularly high risk time to introduce naïve cattle, with clinical disease often occurring 6-8 weeks after arrival. Calves and pregnant females are at greatest risk of developing severe disease. Expensive bulls introduced into the Hunter and Mid Coast region early in Spring have also been known to succumb to theileriosis.

Clinical signs of those affected include lethargy, lack of appetite, exercise intolerance (may lag behind the mob) and pregnant cows may abort or produce stillborn calves. Gums will be pale and/or yellow and there will be a drop in milk production.

Stress and movement of affected cattle should be minimised or they may collapse. If possible, handling affected cattle should be avoided. None of the treatments that have been used to treat theileriosis have produced convincing results (other than blood transfusions). In fact, the exertion required of affected cattle in moving them to cattle yards for treatment has sometimes been responsible for killing cattle that might otherwise have survived if left quietly in the shade. The best approach is to simply provide the animal with easy access to water, food and shelter. Steep dam banks and boggy dam edges can prove fatal to anaemic cattle.

Once infected, cattle then carry the disease for life and are a source of infection to ticks, and therefore other cattle.

Hot, dry springs and summers during the last few years may have meant that fewer calves than normal were exposed to theileriosis in our area. We may now consequently have yearling and two year old cattle that are still naïve to theileriosis. The recent rain has provided favourable pasture conditions for ticks to climb onto and infect cattle and naïve animals may now become infected.

To avoid Theileriosis, assess the risk associated with introducing cattle from southern and western areas. Speak with veterinarians from the district you plan to buy from to find out whether cattle from that area are likely to already be immune to Theileria. Avoid moving heifers and cows in late pregnancy into high risk areas. Producers should target their control measures around controlling tick numbers and cattle exposure to ticks.
LIVER FLUKE

With mid to late autumn being one of the most important times to strategically drench for liver fluke in the region it is timely to revisit Liver Fluke and its management.

Liver fluke is a parasite where the adult lives within the liver of a wide range of livestock and wildlife species. It has an indirect lifecycle which relies on the presence of an intermediate host, a snail, which lives in wet areas on the property. Wildlife are an important reservoir for the continued contamination of paddocks.

Warm wet summers, similar to the late summer we’ve had this year, increase the numbers of larvae and therefore the risk to livestock. Cattle have a natural resistance to infection so clinical disease is often only seen in young cattle but chronic changes can lead to economic losses.

Control is by grazing management and use of strategic treatment with flukicides.

- **Grazing management** includes fencing off likely fluke areas as well as minimising grazing of those areas by the most vulnerable stock- sheep, goats, alpacas and young cattle.

- **Rotational grazing systems** can decrease fluke infections as well but need detailed development with respect to each enterprise.

- **Strategic treatments**- one to three per year depending on severity of problem

  - **April-May**: the most important fluke drench in our region. Burdens can be heavy with a mix of adult and immature fluke. This is usually a tricalabendazole (TCBZ) based drench preferably given orally and best if it includes oxfendazole as well. For cattle there are injectable flukicides available as well clorsulon and nitroxinil which may include a broad spectrum wormer in their formulation.

  - **August-September**- the presence of mainly adult fluke at this time of year means that a drench other than TCBZ may be used unless there is resistance.

  - **Summer**- severely affected properties may require a third drench in summer.

- **Dairy cattle**- note that products for use in lactating cows are only effective against adult fluke so if paddocks are heavily contaminated and being grazed with lactating animals treatment may need to be monthly during summer and autumn followed by a TCBZ treatment immediately after drying off and a month before calving.

- **Targeted selective treatment**- regular monitoring and diagnosis of liver fluke infections using such tools as liver fluke egg counts, blood antibody detection and, for cattle, faecal fluke antigen.

Monitoring of effectiveness of treatment and the possible development of resistance to flukicides should be taken into consideration for all programmes. Remember to always check the labels on treatments and pay attention to withholding periods for product.

For further information contact your District Vet team on 1300 795 299
BUYING HEALTHY BOBBY CALVES

A Bobby calf is aged 5-30 days old and not accompanied by its mother. They are commonly a dairy or dairy cross animal. Bobby calves are often sold through property to property sales and occasionally through livestock markets.

There are rules and welfare guidelines surrounding the transport and slaughter of bobby calves that all involved in the transaction must be aware of and comply with. These rules and guidelines help protect the welfare of the calves, but also may help the bobby calf vendor and purchaser to sell and source calves that have had the best start in life. Calves that are stressed from too long off milk, lengthy transport and harsh environments often succumb to diseases like pneumonia and bacterial or viral scours. Cryptosporidia and coccidia can also be involved.

The following may help you to source and manage calves with the best welfare and production outcomes. Paying a bit more for calves that have had the best start in life and when you have had a chance to speak and get advice from the farmer is a better investment. Introducing calves to a new life takes care and attention to detail and this starts with good calf selection.

Before buying a bobby calf

Rearing a bobby calf is not easy. It can be time consuming and require a meticulous level of nutrition and hygiene to ensure they do not become ill. However, getting it right can be a rewarding experience.

Before purchasing bobby calves, you should ensure you have:

• Knowledge, equipment, infrastructure, time and budget to provide suitable feed, water and husbandry care. Initially they will require milk several times a day and access to grass/hay and calf meal.
• Appropriate transport.
• Appropriate shelter and bedding.
• A clear plan as to why you are buying bobby calves, what market you are aiming for, what age and weight you want to get them to etc.

Calves don’t stay small forever! You should ensure you have suitable facilities on your property for all stages of the animals’ life: This includes water sources, cattle yards with working cattle crush, adequate fencing and appropriate sized paddocks with adequate and suitable pasture for the number of adult animals you will have on the property. A budget for husbandry and veterinary attention is also required and to cover feed costs over winter when pasture growth is minimal or during periods of drought.

Transport Checklist:

To be transported for sale bobby calves must be at least five days old, bright and alert, actively mobile and with no signs of disease such as scours, nasal discharge, cough etc.

- Bobby Calf vendors must have a system in place to accurately age and ensure calves are older than five days before they can leave the farm. The navel must be dry and the hooves firm and worn flat, and not bulbous with soft unworn tissue. These are additional indicators the calf is older than five days and thus able to travel.
- The calf must have been fed milk within the last six hours.
- The calf must have an NLIS tag (it is illegal for cattle to leave a property in Australia without an NLIS tag).
- The Producer must have completed a Bobby Calf National Cattle Vendor (NVD) Declaration.
- If purchasing direct from the calf producer you must transfer the NLIS tag to your property within seven days
- The Producer has completed a National Cattle Health Declaration. This is an optional but very valuable step as it will give you a lot of additional information on the management of the calf to date.
- You have an appropriate livestock trailer that has protection from the heat and cold (eg wind protection on front and shade protection on top) and the trailer has thick bedding (15cm) and room to lie down.
- Transport is less than six hours
**Housing/Shelter and Hygiene Checklist:**

- Calves must be provided with suitable housing that gives a minimum 2.5m² space per calf. Has good drainage, protection from wind, draughts, rain and heat and with good ventilation for air quality. Calves do best in environments that are clean and between 12-23 degree Celsius.

- Comfortable dry bedding eg. rice hulls or sawdust is important as is regular bedding replacement or top up, when it becomes soiled or wet. Soiled bedding in sheds can predispose calves to pneumonia and scours.

- Thoroughly clean feeding equipment after each use and clean water containers regularly.

- Calves are still developing a competent immune system. Thus, good biosecurity to prevent diseases entering the calf area is important. Ensure handlers clothes, boots and hands are always clean. Regularly disinfecting rails, partitions, walls and gates in calf pen can also help to reduce diseases that calves might be exposed to.

- If you have previously raised calves, completely disinfecting the calf area and replacing all bedding prior to the new batch entering is a key step to protect the next calf group.

- Hygiene is important for your own health as well as the calf. Many of the diseases (cryptosporidium, salmonella and E.coli) that can make your calf ill can also affect humans, particularly children. Always wash your hands with soap and water after feeding or touching the calves and do not handle calves if you are ill.

**Nutrition**

Calf feeding is important to allow adequate rumen development and to ensure optimum growth and health. Calves fed a suitable quantity and quality diet have less disease. Some of the things you will require include:

- Quality milk replacer. Multiple brands are available from local produce stores in the region.
- Sufficient means to provide milk or replacers to the calves - eg. bottles, ‘calfeteria’, troughs with a minimum 35cm head space per calf at troughs. Troughs should be raised off the ground to prevent contamination.
- 24hr access to fresh clean water.

**A guide on how to feed:**

- A quality milk replacer is essential
- Calculate the daily intake per calf from the nutritional information for the particular product you are using. As a guide, the calf should get approximately 10% of its bodyweight in milk – ie a 35kg calf should get approximately 3.5L per day, split between feedings. As the calf grows, adjust accordingly.
- Feed the warm milk replacer twice a day (morning and night) until four weeks of age.
- Introduce small qualities of concentrates (a handful per calf per day of a high-quality grain or calf starter) from one week old. This is crucial for rumen papillae development. Commercial calf concentrates can be sourced from your local produce store. Build up to a kilo per day per calf for weaning at three months.
- Introduce quality fibre (hay, chaff) from about three weeks old.
- Allow paddock access from four weeks old.
- Between 4 weeks and 12 weeks of age, continue feeding the warm milk replacer once a day
- Aim to wean the calves from milk when they are consuming the hard feed consistently at a minimum of 12 weeks old or 100 kilo live weight.

Everyone who handles calves must treat them with care and patience at all times and protect them from the elements and disease.

Care of bobby calves is an important part of the social licence all Dairy and Beef farmers have with the community. This means that the community trusts and expects Bobby calf welfare to be maintained while they are being sold or transited. (See ‘Questions to ask the Dairy Producers before buying a bobby calf’ p12)

In the next edition we will discuss key diseases to watch out for that can frequently affect Bobby calves as well as vaccination, worming treatments, castration and disbudding.

This information is adapted from Dairy Australia.com.au Rearing Healthy Calves Manual. Thanks to Liam Mowbray, Veterinary Graduate, Charles Sturt University.
Questions to ask before buying bobby calves

Dairy producers are adept at raising dairy calves and are a great source of information to help you manage the transition that these calves must undergo when leaving the dairy farm. Ensure you are familiar with the steps the bobby calf producer has undertaken to produce a viable, healthy and robust calf.

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>WHY IT’S IMPORTANT</th>
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<tbody>
<tr>
<td>Has the calf had 2L of high quality colostrum twice before 12 hours old?</td>
<td>Colostrum provides maternal antibodies for prevention of some diseases and will assist calf health and growth rate. Scours maybe associated with calves that did not receive colostrum quickly after birth.</td>
</tr>
<tr>
<td>Did the colostrum come from cow(s) who received a clostridial disease booster vaccine 10 weeks prior to calving?</td>
<td>Cows start producing colostrum five weeks before calving. They take an additional five weeks after vaccination booster to reach maximum antibody levels. Therefore, cows should receive vaccination booster 10 weeks before calving so that calves get the maximum antibody protection against disease. This ensures your calf has initial protection from clostridial disease for the first 8-12 weeks of life until you vaccinate the calf.</td>
</tr>
<tr>
<td>What other vaccines are used on the farm to protect against common diseases such as Pestivirus or some causes of scours such as Salmonella or Rotavirus?</td>
<td>Every Farm has a different level of exposure to a range of endemic diseases. Pestivirus for example is a common disease and you should know the pestivirus status of cattle coming to your farm. A completed National Cattle Health Declaration is a simple way to ascertain this type of information.</td>
</tr>
<tr>
<td>Has the calf been housed in a clean, dry shelter?</td>
<td>Calves exposed to mud and manure are at greater risk of developing common calf illnesses.</td>
</tr>
<tr>
<td>Has the calf or its pen mates shown any signs of sickness or disease?</td>
<td>Calves that are lethargic, not suckling, dehydrated, scouring or coughing, are ill. These calves should be left in the care of the birth farm. Talk to the farmer and your veterinarian how to manage these issues should they appear.</td>
</tr>
<tr>
<td>Has the calf been fed any milk from cows which may contain treatment residues?</td>
<td>Feeding calves milk containing residues means the calf will have a withholding period before it can go to a processing facility. A completed Bobby Calf NVD is legally required to capture this information.</td>
</tr>
<tr>
<td>What is the Johnes Disease Dairy Score of the Dairy Farm and is that compatible with the Johnes Disease Score of your farm?</td>
<td>Johnes Disease is a chronic, incurable disease of adult cattle caused by the bacteria Mycobacterium paratuberculosis. Symptoms include diarrhoea, reduced milk production, weight loss and eventually death. The disease is frequently passed from cow to calf unless specific calf rearing controls are in place on that farm.</td>
</tr>
</tbody>
</table>

See our AG EXTENSION NEWSLETTER:

HERE’S HOW TO CONTACT YOUR DISTRICT VET:
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