



Investment Guide

Lot Feeding

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Overview of the Lot Feeding Industry

Buloke Shire Council is actively seeking to attract investment in intensive lot fed sheep and cattle production, and related business activities, to the Shire.

Lot feeding is the practice of housing animals in a confined area and providing all nutritional requirements in the form of rations. It allows operators greater control over the quality and timing of supply than is possible with grass finishing, which is subject to seasonal conditions. The feedlot operator can also tailor feeding regimes to produce beef and lamb targeted to particular markets, for example the highly marbled Japanese long-fed beef market (usually fed for more than 200 days) or the short-fed domestic beef market (usually fed for 70 to 150 days).

Sheep/Lamb Lot Feeding

Lot feeding enables producers to achieve consistent supply of quality lamb to meet market specifications for weight and fat score. It also provides an opportunity to sustain production during times of low pasture availability or achieve rapid growth when feed prices are low. Six to ten weeks (40 to 70 days) is the period of time for lot feeding sheep when the objective is finishing stock for market. As a secondary function, lot feeding is used in general farm management strategies, particularly to maintain stock during drought and to keep stock off emerging pastures at the break of the season. In Victoria, sheep lot feeding tends to be opportunistic, or determined by market conditions. The number and scale of lot feeding operations therefore fluctuates from year to year and there are few permanent (constructed) feedlot facilities.

Lot feeding has the potential to offer a profitable enterprise in its own right. Finishing fat lambs for market can be achieved by sending stock to a dedicated (off-farm) facility or containing stock on-farm in temporary or permanent pens.

At times of low feed grain prices, and relatively high lamb prices, lot feeding becomes an attractive option if farmers are prepared to devote time setting up a feedlot. Wool producers can also benefit from management advantages by using a feedlot to reduce grazing pressure and protect the ground from erosion caused by a loss of vegetative cover.



Benefits of lamb lot feeding include:

- Animals can be delivered to suit a particular market's specification for weight and quality.
- Continuity of supply can be improved (finishing lambs at times of the year that are traditionally non-seasonal).
- Seasonal variations clearly have an impact on lamb prices for the domestic market, so if producers can deliver when there is a shortage, they can take advantage of higher prices.
- Lot feeding allows farmers to establish more attractive supply chain arrangements and premium markets away from the traditional sale yard methods (which still account for the majority of prime lamb sales).
- A management tool to help control feed availability, limit soil erosion and seed contamination, improve pastures, and improve stock condition. Keeping stock off pasture for four-six weeks allows it to become well established at the break of the season and stubble can be more easily maintained. These benefits may also be achieved by a broader strategy of sheep 'containment' (in semi-intensive pens and paddocks) without the infrastructure needed in a formal feedlot.
- Permanent sheep feedlot operators can be an additional market for farmers in selling stock, which is either produced specifically for this market or is surplus to on-farm stocking needs or limits.

Cattle Lot Feeding

Most beef cattle in Victoria are kept on managed pastures, but around 10% of the beef cattle herd is grown out in feedlots. This is a lower proportion than in Queensland and New South Wales. There are approximately 50 specialised beef cattle feedlots in Victoria, of which about half are accredited under the National Feedlot Accreditation Scheme.

Victorian feedlots are predominantly geared to produce grain-fed beef for the domestic market, with shorter feeding regimes and higher turnover rates compared to feedlots in Queensland and New South Wales. There are some foreign investors who have expressed interest in lot feeding cattle in Victoria for live export, but the merits of this approach are highly doubtful with the potential for stock to lose condition during the journey and negate the benefits of lot feeding. Australian cattle are not lot fed for whole-of-life nor even for the majority of time (being raised on pasture, typically between 85% and 90% of their lives). Most feedlots purchase feeder cattle from farmers, with some feedlot operators owning their own pastoral operations, and finish the cattle on grain rations.

To be sold as grain-fed beef to the domestic market cattle must be fed a predominately grain-based diet for at least 60 days for heifers or 70 days for steers, and the overall average is 80 days in the feedlot. Cattle for export beef must spend a minimum of 100 days on grain rations. The Australian Lot Feeders' Association (ALFA) suggests that cattle spend between 50 and 120 days on average in a feedlot in Australia, the shortest period in the world. The length of time does vary by market. For example, cattle for domestic markets usually spend a minimum of 60 to 70 days on the feedlot, while cattle that produce beef for export markets spend 100+ days on the feedlot. Lotfeeders purchase feeder cattle from backgrounders and other pastoral cattle farmers (including owned or contracted grower operations) that have weaned and grown cattle.

Like sheep lot feeding, but not to the same extent, the number of beef cattle feedlot enterprises can fluctuate from year to year. This is because, again like sheep lot feeding, beef feedlots can operate opportunistically; only keeping feedlots in operation when market and operating conditions are favourable. The opportunistic nature of beef feedlotting is less than sheep lot feeding for two main reasons:

- The physical infrastructure for cattle feedlots is more extensive and costly than sheep containment areas, and
- There can be substantial premiums for grain-fed beef produced to market specifications, while this is not the case for lamb.



When the prices for feeder cattle are too high, feeder cattle availability is low, over-the-hook prices are low or downstream demand is weak, and accreditation costs become a significant proportion of operational expenses, operators may close feedlots temporarily or permanently.

Strong demand for premium-grade grain-fed beef, both domestically and overseas, has led to a significant expansion of lot feeding in some regions over the past 30 years. Feedlotting tends to be a low-margin activity, with cattle and feed costs accounting for around 68% and 25%, respectively, of revenue earned. Because cattle and feed are bulky and expensive to transport, feedlots tend to be located close to grain-producing regions with ready access to cattle. There are around 450 accredited beef cattle feedlots across Australia.

While beef feedlotting can be opportunistic and responsive to changes in seasonal conditions and grain prices, the demand for grain-fed beef has been the main driver of investment in feedlot capacity since the early 1980s, especially in export markets.

By 1995 the preference for grain-fed beef had led to a change in Australian production systems, with almost 40% of all Australian beef exported to Japan being grain-fed, compared with only 10% a few years earlier, in 1988. These developments have contributed to growth in the feedlot sector outpacing growth in the broader beef cattle industry.

Why Buloke Shire?

Buloke Shire, in north-central Victoria, is well suited to both sheep and cattle lot feeding investments:

- The Shire offers sound and healthy livestock country.
- There is existing feedlot expertise in the region.
- The area is a centre for feed grain production, and offers fodder crop flexibility (barley, wheat, pulses and lucerne).
- The Wimmera Mallee Pipeline provides water security to enable finishing of lambs and cattle without reliance on the performance of dryland pastures.

Although Buloke Shire's agricultural activities are dominated by broadacre grain production, it has been a base for sheep, cattle and pig farming since the early days of European settlement. Production of wool, mutton and prime lamb, in particular, was common for many decades in complement to grain operations.

The major beef operation in the Shire is a feedlot near Charlton, while sheep feedlotting in the Shire at present is mostly a seasonal or opportunistic, rather than permanent, activity. The Shire is well placed to access multi-species, lamb, and/or beef processing plants across the broader region. For example, abattoirs are located in Stawell, Kyneton, Echuca, Naracoorte, Melbourne, Bacchus Marsh, Warrnambool, Ararat, Swan Hill, Bordertown and Colac.

Buloke's climate, grain growing farming base, and the ability to provide sufficient distances between feedlots, waste disposal areas and dwellings make it a great location for both lamb and beef lot feeding.

Buloke's communities are generally supportive of lot feeding operations and they understand that these ventures; complement grain growing and existing extensive livestock farming in the Shire, make an important contribution to the economy, add to local diversity, and provide local jobs. Land prices for both dedicated feedlot ventures and feedlots with a grazing or cropping component, could be expected to be around \$20,000-\$25,000 per hectare (or \$8,000-\$10,000 per acre) with very few sales of properties less than 80 hectares.



Buloke Shire is at the centre of a region which produces 17.6% of Victoria’s sheep and lambs, contributing 16.6% of the gross farmgate value. The region has a smaller share of meat cattle with 3.4% of the State’s stock and 3.7% of the gross farmgate value, but this region is the State’s heartland for grain and legume production: Ideal for sourcing feed mixes and rations for feed lot enterprises.

Buloke and Buloke Region Sheep/Lamb and Meat Cattle Production, 2020-21

	Sheep and Lambs	Beef Cattle
Number of Grower Businesses: Buloke region (including Buloke, Gannawarra, Loddon, Yarriambiack, Hindmarsh, Northern Grampians and Horsham local areas)	1,686	480
Stock (head): Buloke Shire	291,295	21,271
Stock (head): Buloke Region	2,701,054	72,037
Buloke region: % of Victorian stock	17.58%	3.38%
Farmgate Gross Value Buloke Shire 2020-21 (\$)	28,063,098	15,406,407
Farmgate Gross Value Buloke region 2020-21 (\$)	315,230,395	95,825,870
Buloke region share of Victorian Production Value (%)	16.60%	3.71%

SOURCE: ABS Agricultural Census 2020-21

There is no minimum stocking level for a feedlot and there are some small and informal stock containment activities, although serious enterprises seek to have sufficient scale for the feed and logistics cost-efficiencies needed to achieve profitability. The size of the feedlot will usually be determined by whether the infrastructure is permanent, and whether the feedlot is a dedicated enterprise or a component of mixed farming activities. If it is the latter, the size may be determined by what can be handled by one person or a family.

Site and Infrastructure Requirements

The following notes relate to suggested land and infrastructure for lot feeding operations. Farmers and investors may be able to work around deficiencies in many of the preferred natural or installed assets, through design, innovation or making trade-offs.

Unsurprisingly feedlots are located in areas that are in close proximity to sheep or cattle (although bio-security provisions might stipulate significant separation distances for intensively housed stock), grain supplies and water.

Feedlots have the potential to pollute groundwater through leaching of nutrients and pathogens from feedlot pads, effluent ponds and manure and irrigation reuse areas. The protection of groundwater can be achieved by good site selection, feedlot design and management.

Cattle Feedlots

Selecting a cattle feedlot site requires the potential location to be tested through a series of modelling steps. Critical factors include:

- Distance to houses, urban areas and other sensitive uses.
- Topography and any exposure to floods
- Water supply
- Soil types
- Groundwater and water supply characteristics.

The site selected must also have access to sufficient areas for waste disposal and/or waste re-use.

Final cattle weights after lot feeding range from about 400 kilograms to 750 kilograms liveweight. A ‘standard cattle unit’ (SCU) is used to compare all feedlots on a comparable basis. An SCU has a liveweight turnoff of 600 kilograms.



A feedlot with fewer than 50 head of cattle is exempt from most of the planning and design requirements provided that it complies with the following approval measures:

- The feedlot is outside a declared special water supply catchment.
- It is above the 1 in 100 years flood level.
- It is not in an active flood plain.
- No part of the feedlot is closer than 300 metres to a farmhouse on an adjoining property.
- There is a minimum set back of 200 metres from a watercourse, groundwater recharge area, bore or spring.
- There is a minimum set back of 800 metres from the full level of a water storage used for the supply of potable water, or the take-off or bore for the supply of potable water.
- There is a minimum set back of 200 metres from any road
- Pen density does not exceed one head of cattle per 20 m² (pen density is the pen area divided by the number of cattle)
- The feedlot pens will have a uniform slope of not less than 2% and not greater than 6%.

A cattle feedlot with more than 50 head should comply with objectives, accepted standards and (where needed) approved measures, across eight key elements:

- Location and site
- Design and construction
- Odour
- Noise
- Waste storage, treatment and use
- Traffic and parking
- Landscaping
- Operations and management.

In designing a cattle feedlot there are several available feeding systems to consider, which vary according to the desired size and intensity of the feedlot. Possible feeding systems include self-feeders containing dry grain mix and separate roughage, an open trough system with all-in feed mixes (grains, roughage and additives), and pellets. Feed rations need to be tailored to meet achieve desired growth rates. The proportions of protein, energy, minerals and roughage are major contributors to potential growth rates of lot-fed animals. Common components of a feed ration include cereal grains, grain legumes, hay and silage, minerals and buffers. Each yard is up to 6,000 square metres in size; not a set area per animal, but enough space for all cattle to exhibit natural behaviour in terms of movement and interaction.

Intensification results in a need for an increase level of management of both livestock and the business, requiring both specialised skills and improved monitoring strategies particularly of the livestock.

Lamb Feedlots

Modern lamb feedlots do not have the consistent design and layout approach that is used with cattle feedlots. Design guidelines vary widely and the level of research for sheep feedlots is limited. The design will vary depending on whether the objective is to finish lambs out of season or to finish lambs all year round for a specific market. Typical components of a lamb feedlot are:

- Pen areas
- Lamb Handling spaces (receival, induction and dispatch)
- Shearing Shed
- Feed Storage, Preparation and Distribution Systems
- Water Supply System
- Runoff Control Systems
- Manure Cleaning, Storage and Spreading Systems



The pen area required for a feedlot is determined by the total number of lambs multiplied by the stocking density. A 2009 study for the Wimmera Mallee Pipeline, assumed that 5 square metres per standard lamb unit (SLU) is an appropriate stocking density. Pen sizes vary depending on the size and operation of the feedlot; larger feedlots usually have larger pens that can accommodate 1,000 to 1,200 SLU's per pen.

If no land is required for effluent irrigation or manure utilisation, the area of land required for the lamb feedlot are the pen areas and associated facilities which could include access roads, lanes, drains, sediment basin, evaporation pond, manure stockpile area, lamb handling facilities, shearing shed and feed storage and preparation (mixing or milling) areas. The area required for the associated facilities for cattle feedlots is 2 to 3 times the pen area. Provision of a total lamb feedlot area which is 3 times the area of the pens is a conservative provision.

Site and Infrastructure Needs for Lamb Feedlots

	5,000 standard lamb units	20,000 standard lamb units	50,000 standard lamb units
Pen areas (hectares)	2.5	10	25
Feedlot area (hectares)	7.5	30	75
Annual water demand (megalitres/year)	9	36.5	90
Peak water demand (megalitres/day)	0.04	0.18	0.44

Annual water demand is based on 5 litres/head/day and peak demand is 9 litres/head/day

SOURCE: FSA Consulting (2008) Wimmera Mallee Pipeline Project Lamb Feedlot Site Suitability Study for DPI

The CSIRO Model Code of Practice suggests the following minimum space requirements for sheep in feedlots:

- Indoor feedlot pen with more than 30 sheep: 0.5 square metres per head
- Outdoor feedlots
 - o Lambs up to 41 kilograms 1.0 square metres per head
 - o Adult sheep 1.3 square metres per head
 - o Heavy wether (fat score 5) 1.5 square metres per head square metres per head
 - o Ewe with lamb(s) 1.8 square metres per head.
 - o Overall 6,000 SLU per hectare (smaller feedlots have 250 - 500 SLU's per pen).
 - o Pens must also provide sufficient space at feed and water troughs.

Securing a Position in the Supply Chain

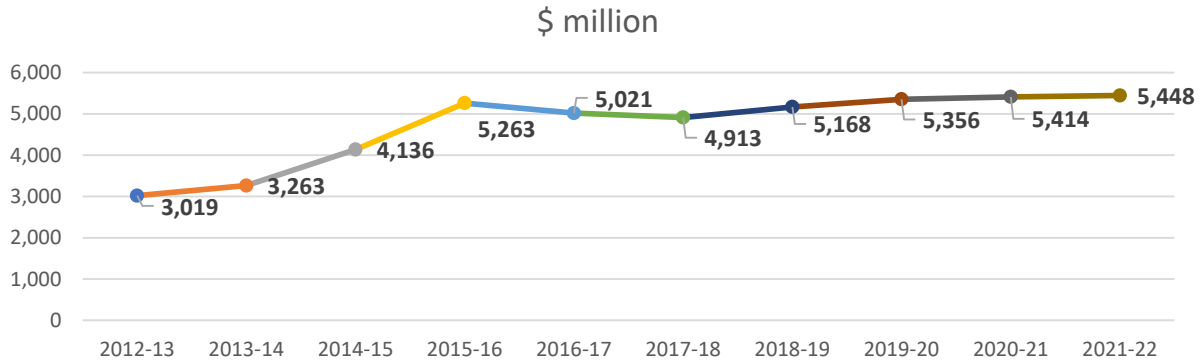
Knowing who the feedlot will supply is critical, and securing a customer, a contract, or another clear channel to market, should be a first step by any intending investor.

For a beef or sheep feedlot operator the next link in the supply chain is an abattoir, but potential market channels include processors, wholesalers, butchers, retailers, food service businesses, and export destinations. Unlike other intensive livestock production, supply chains are not as closely controlled by the processing companies, and individual producers and groups (or networks) of producers often develop and service their own markets. In fact, most feedlot operators choose between domestic or export markets as their supply chain focus, but not both. In the case of lot fed beef, about 55% goes to domestic markets, and spends a shorter period in the feedlot (averaging 80 days).



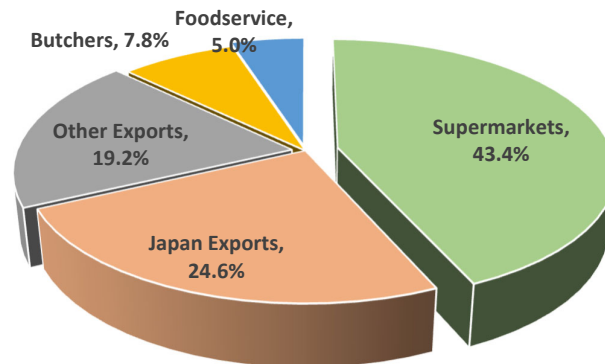
In 2022 the estimated annual revenue for the Australian beef feedlot industry is \$5.4 billion, and this has increased at an average annual rate of 6.7% over the past decade, with an average profit margin (before taxation) of 12.7%. There were 383 known cattle feedlot enterprises (of which 275 were small-to-medium enterprises).

Trends in Australian Cattle Feed Lot Revenue 2012-13 to 2021-22



Lot Fed Beef Markets 2021-22

Markets for Australian Lot Fed Beef



There are some large corporations in the beef lot-feeding industry. However, each company's market share has grown over the past decade due to increased consolidation and merger and acquisition activity. For example, Teys Australia Pty Ltd (owned by the Teys family) and Cargill Australia formed a joint venture in 2011, merging their Australian cattle feeding and beef processing businesses. In July 2014, Teys Australia also purchased the Charlton feedlot (in Buloke Shire) from Elders Ltd.

Opportunities for sales to meat processors on the spot market have fallen substantially due to greater volumes of meat being sold to vertically integrated processors. As major producers and processing companies take ownership of the supply chain, the ability to control the entire production process not only saves on costs, but also allows for greater quality control of the final product. This trend is expected to continue as costs are reduced by economies of scale. For meat processors that are not vertically integrated, it is likely that direct relationships with farmers will be established, further minimising spot market sales of beef and lamb.



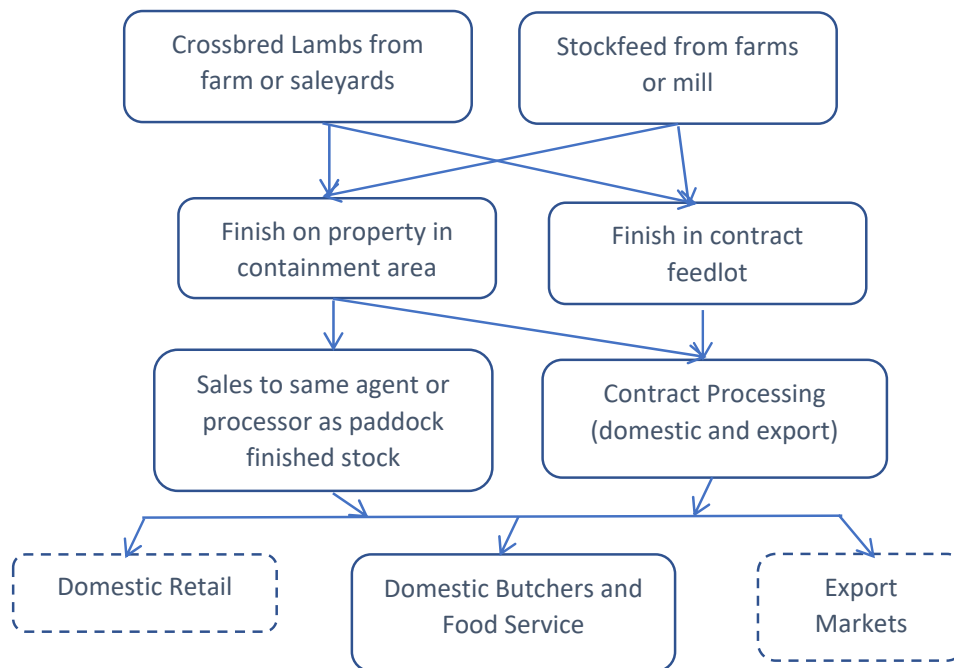
The majority of beef feedlotting businesses supply their own cattle for lot feeding and tend to be small to medium family owned operations. These operations have a market share of almost 75%, which suggests that the biggest feedlot companies, namely Industry Park (which trades as JBS Australia), Teys Australia, Mort and Co, Australian Country Choice Holdings, and Bindaree Beef) have a combined market share of about 25%.

Industry Park Pty Ltd (JBS Australia) is a subsidiary of the Brazilian company JBS SA and is the largest feedlot operator in Australia. The company is the world's largest beef, leather and lamb producer, and the second-largest chicken producer. JBS SA entered the Australian market in 2007 with the acquisition of Australian Meat Holdings. Subsequent acquisitions in Australia include Tasman Group (2008), Tatiara Meat Company (2010), Rockdale Beef (2010), Primo Group (2015) and a majority shareholding in Andrews Meat (2014). JBS Australia operates six feedlots (5 in Queensland and 1 in New South Wales) and is quite vertically integrated with processing plants and distribution centres. In July 2018, the company entered an agreement to sell its feedlots to Rural Funds Management under a sale and lease back deal. Under the deal, JBS will continue to manage and operate the feedlots for up to 10 years, with a minimum five-year agreement¹.

Teys Australia Pty Ltd is the second largest feedlotting company, through a joint venture with Cargill Corporation. The joint venture commenced in September 2011, when the companies merged their Australian cattle feeding and beef processing businesses. The joint venture is the second-largest meat processor and exporter in Australia. The joint venture operates three cattle feedlots and six beef-processing plants. The feedlots are able to turnover more than 230,000 head annually:

- Condamine feedlot in Queensland's Darling Downs farming region with a capacity of 30,000 head of cattle and an annual cattle turnover of approximately 90,000 head.
- Jindalee feedlot in NSW, with a 17,000 head capacity.
- Charlton feedlot in Buloke Shire, with a capacity of 20,000 head. This is Victoria's largest feedlot on a 776 hectare property of which 150 hectares is used for feedlot infrastructure and facilities.

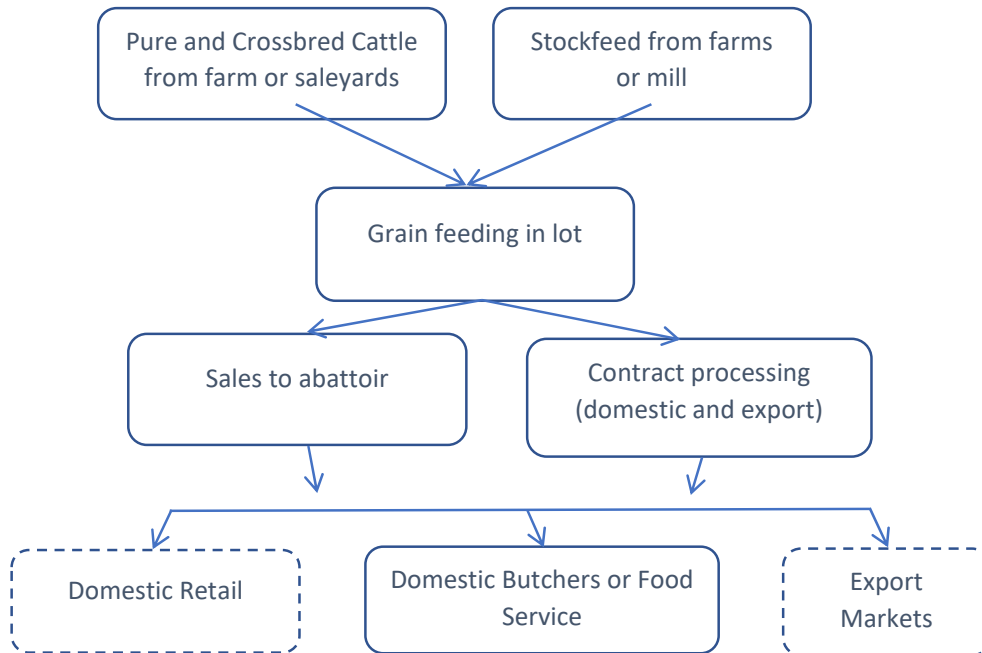
Sample Lot Fed Lamb Supply Chains



¹ IBISWorld Cattle Beef Feedlot Report 2021



Sample Lot Fed Beef Supply Chains



Day to Day Management



Feeding

Common components in a beef feedlot ration are grain legumes, cereal grains, hay and silage, minerals and buffers. Examples of cattle lot feeding systems include:

- Self-feeders with dry grain mixes and separate roughage.
- All-in mixes containing grains, roughage and additives, often fed using an open trough or bunk system.
- Pellets.

For sheep, rations typically comprise a mix of barley, oaten hay, oats and lupins, although other cereal grains and feedstuffs are used dependent on price and energy content. Sheep being introduced to an intensive feeding system must be given time to adjust both to the new dietary regime and the use of troughs. As a guide, Agriculture Victoria suggests conversion to a grain-based diet can be achieved by gradually replacing roughage over a period of 7–14 days. Where sheep are being introduced to a diet containing more than 60% cereal grain, the roughage should be gradually withdrawn over a minimum of 3 weeks.

Adequate trough space should be provided. If food is offered at set feeding times, up to 20 cm of trough space per sheep is needed, to allow all sheep to stand and feed at the same time and to reduce adverse feeding competition. If feed is available throughout the day, the trough space can be substantially reduced. Close monitoring, and identification and treatment of shy feeders should remain one of the manager's major concerns throughout the feedlotting period and especially during the introduction of sheep to new types of feeds.



Staff and Labour

About 60% of beef feedlots do not employ any additional staff, relying only on owner operators. Corporate beef feedlots employ stockmen and stockwomen who supervise cattle each day. These staff are specifically trained in animal welfare, husbandry and handling along with quickly identifying any animals that may appear sick so that they can be isolated from other animals and treated as soon as possible. Feedlots also employ qualified veterinarians to oversee their animal health programs. As feedlot cattle are also protected from floods, fire, droughts and wild animals; mortality levels are lower than in extensive grazing systems. Some larger feedlots, which have in-house feed mills, also employ nutritionists and feedmill operators.

A seasonal, or containment area, sheep feedlot may not require additional labour. Staff requirements for permanent sheep feedlots are typically 1 full-time staff for every 9,000 – 10,000 sheep.



Biosecurity

Sites, which are initially identified as suitable, may have planning restrictions due to zoning provisions or overlays (related to the environment or heritage). These provisions can be checked in advance with help from Council staff, or will be advised during the planning permit process.

Feedlot 'separation' distances can be calculated by the formula $D = SvN$, where

- D = separation distance (minimum)
- N = feedlot capacity in standard cattle units (SCU) or lamb units (SLU)
- S = composite site factor.

The composite site factor addresses site-to-site and time-to-time variations in locations through five sub-factors: $S = S^1 \times S^2 \times S^3 \times S^4 \times S^5$, where

- S^1 is the design and management factor
- S^2 is the receptor type factor
- S^3 is the topography factor
- S^4 is the vegetation cover factor
- S^5 is the wind direction factor.

The National Guidelines for Beef Feedlots (MLA) and the Wimmera Mallee Pipeline Lamb Feedlot Site Suitability Study (DPI) provide advice on measuring the factors in this formula.

Access

Feedlot construction and operational activities will increase the amount of traffic and alter the time of peak movements. Care is necessary to ensure the changes do not cause a nuisance. Sealed bitumen road access is preferred for servicing permanent feedlots. If the nearest sealed road is not VicRoads controlled, the development costs for access to the site may be reduced. However, Council roads may also require some access expenditure from the farmer. *Note: Buloke roads have no restrictions on B-doubles.*



Water

Access to Wimmera Mallee pipeline water needs to be calculated to allow for stock to drink and for wash down purposes. Both cattle and sheep stock must have access to water at all times.

Beef: Water requirements for a 450 kilograms steer ranges from 70–100 litres per day in hot dry conditions, and there must be at least three days water supply in storage that can be distributed using a non-electrical means (such as gravity fed water from an overhead tank).

Sheep in feedlots may drink up to 6 litres per day during hot weather. If nipple drinkers are used in pens, one drinking nipple should be provided for every 15–30 sheep (and sheep may need to be trained for a few days to use nipple drinkers), with a minimum of two per pen. One watering bowl is required for each 60 sheep.

Power

Access to single phase power is adequate, although three phase power is ideal for large operations with electronic systems. Power availability must be checked with Powercor by the farmer to ensure there is sufficient capacity at each installation.



Finance

The beef feedlot industry is highly capital-intensive industry. A feedlot is a fixed asset with no alternative use. Conversely, sheep feedlots tend to be inexpensive. Those involving temporary containment areas can be both cheap and flexible, while a fixed outdoor sheep feedlot is also less capital intensive than for beef.

An indicative capital development budget for a beef feedlot in Buloke Shire is:

- Planning, registrations, accreditations: \$0.1 million
- Land acquisition (500 hectares): \$11.3 million
- Infrastructure and construction: \$6.0 million
- Machinery and equipment: \$2.5 million
- **Total Intensive Feedlot (10,000 head): \$19.9 million**

An indicative capital development budget for a permanent lamb feedlot (rather than opportunistic and flexible containment area) in Buloke Shire is:

- Planning, registrations, accreditations: \$0.1 million
- Land acquisition (100 hectares): \$2.3 million
- Infrastructure and construction: \$1.5 million
- Machinery and equipment: \$1.5 million
- **Total Intensive Feedlot (5,000 head): \$5.4 million**



The average Australian beef feedlot business (establishment) has an estimated income of \$14,224,500 in 2021-22. The average business expends an estimated;

- 72.0% of annual income on input purchases (feeder cattle, stockfeed, fuel, water purchases, etc)
- 1.3% of annual income on wages. Notably about 60% of feedlots are non-employing businesses; with only owner-operators who take drawings or dividends rather than wages.
- 1.4% of annual income is written-down to depreciation
- 2.8% of annual income on utilities (power, water, and waste)
- 4.1% of annual income on repairs and maintenance
- 0.9% of annual income on transport
- 5.0% of annual income on all other costs (insurance, marketing expenses, levies, etc),

and achieves 12.7% an annual net profit (before tax)².

The average small-to-medium beef feedlot business (ie all those feedlot enterprises with sales less than \$10 million per annum), which constitute 72% of all beef feedlots, has an estimated income of \$1,741,800 in 2021-22. The average small-to-medium business an estimated:

- 74.3% of annual costs on input purchases (feeder cattle, stockfeed, fuel, water purchases, etc)
- 8.2% of annual income on wages
- 4.4% of annual income on utilities (power, water, and waste)
- 4.8% of annual income on all other costs (depreciation, insurance, repairs and maintenance, marketing expenses, levies, etc),

and achieves 1.6% an annual net profit (before tax)³.

Typical lamb feedlots would have a similar expenditure profile to the small-to-medium beef feedlots, with the major exceptions for those that are finished in containment yards, where capital costs are much lower (and therefore depreciation is less) and lamb purchases may not be required if they are sourced from the lotfeeder's own farm (depending on how the business is structured).

² IBISWorld Beef Cattle Feedlot Industry Report 2022

³ IBISWorld Small to Medium Enterprise Beef Cattle Feedlot Industry Report 2022



Statutory Requirements

The Model Codes of Practice for the Welfare of Animals include codes referring to cattle and sheep, and these codes (developed and reviewed by representatives of the Australian and state/territory governments in consultation with stakeholders) provide a guide to relevant legislation.

It makes good business sense to engage a specialist consultant to work through the process of planning and building for a permanent feedlot enterprise as there are a myriad of rules and regulations that need to be followed, although unnecessary for a very small cattle feedlot (less than 50 head) or a seasonal sheep containment feedlot. A layperson may have the ability to work through the requirements, however it is likely to take considerably longer and lead to mistakes needing correction which will add to the cost of the project compared to engaging a consultant from the outset.

Planning permits must be applied for if you are planning to create an intensive livestock enterprise in a farming zone.

The planning permit process takes about 3 months provided there are no objections to the proposal. The plan must be advertised publicly for 28 days in local papers to allow people to object to the proposal. If there are objections this can create large extensions to the timelines.

If there are no objections and the plan meets all conditions required for this industry a permit will be issued once ratified by Council.

It may also be sensible to engage a specialist consultant to work through any building permit processes for a commercial feedlot enterprise as there are a myriad of rules and regulations that need to be followed.

Building permits cannot be issued until a planning permit has been issued.

Building permits are less onerous than planning permits in that they do not have the capacity for public comment. Provided the building permit adheres to the regulations for buildings and meets all statutory requirements, a permit will automatically be granted.



PLANNING CHECKLIST

The first step in planning involves identification of any land use or zoning issues from Council, other agencies responsible for feedlot licensing and approval, water licensing, soil conservation and vegetation clearing. Consultation with the relevant agencies, ideally through a pre-lodgement, on-site meeting, helps to determine if the site is suitable, and the major issues to be addressed in an application. These issues are listed below in a checklist.

The next step is to gather and compile the information. Submission of application forms and supporting information, advertising the development and formal assessment, will follow.

ISSUE	Check
GENERAL MATTERS	
Applicant contact details	
Plans and maps	
Cadastral map showing property boundaries and ownership	
Locality plan	
Topographic map	
Local environment plan or planning scheme context	
Aerial photograph	
FEEDLOT DESIGN AND OPERATIONAL INFORMATION	
Proposal Outline	
Operational Scale	
Cattle/sheep live weights and standard cattle units/standard lamb units	
Stocking densities	
Feedlot class/classification	
Construction and proposed staging of development	
Property Plan	
Feedlot site within property	
Existing buildings and infrastructure	
Access roads	
Drainage lines	
Waste utilisation areas	
Feedlot Plan	
Feedlot pens size, layout and location	
Cattle/sheep movement and drafting lanes	
Feed stations	
Handling yards	
Manure stockpiles and other composting pads/areas	
Feed and silage bunks, and feed mill if relevant	
Plan of Controlled Drainage Area	
Diversion banks	
Pen drainage	
Catchment and main drains	
Sedimentation system and holding pond(s)	
Plan of Waste Utilisation Area	
Manure reuse area	
Effluent reuse area	
Watercourses	
Traffic	
Traffic volumes	
Access routes and times	
Water Supply	



Source and legal access	
Water quality	
Adequacy of supply and contingency measures	
Carcass Disposal	
Normal mortalities	
Mass disposal contingency arrangements	
EXISTING ENVIRONMENT	
Climate	
Rainfall (historic records and storm incidence)	
Evaporation	
Temperature	
Wind data	
Geology	
Landform	
Surface Water	
Catchment hydrology	
Surface water quality	
Flood susceptibility	
Soils	
Soil samples across the site	
Chemical properties	
Physical properties	
Land capability	
Vegetation	
Existing vegetation	
Proposed clearing/vegetation impacts of development	
Groundwater	
Hydrogeological assessment	
Groundwater data	
Salinity hazard areas	
Buffer Distances	
WASTE MANAGEMENT	
Manure	
Cleaning procedures and frequency	
Location of manure stockpile	
Design and construction of manure stockpile	
Stockpile drainage	
Stockpile management	
Manure utilisation plan	
Spreading method	
Liquid Waste	
Catch and main drains; flow rates and capacity	
Sedimentation system capacity	
Holding ponds capacity	
Liquid waste utilisation and application	
Odour Noise and Dust	
Odour generation, impact and control	
Dust generation, impact and control	
Noise generation, impact and control	
Animal Welfare Statement	
Flora and Fauna Impact	
Archaeological and Heritage Impact	

Adapted from the National Guidelines for Beef Cattle Feedlots, 3rd Edition, 2012, Meat and Livestock Australia