



# Lot Feeding Investment Guide

April 2022



# Industry Insights

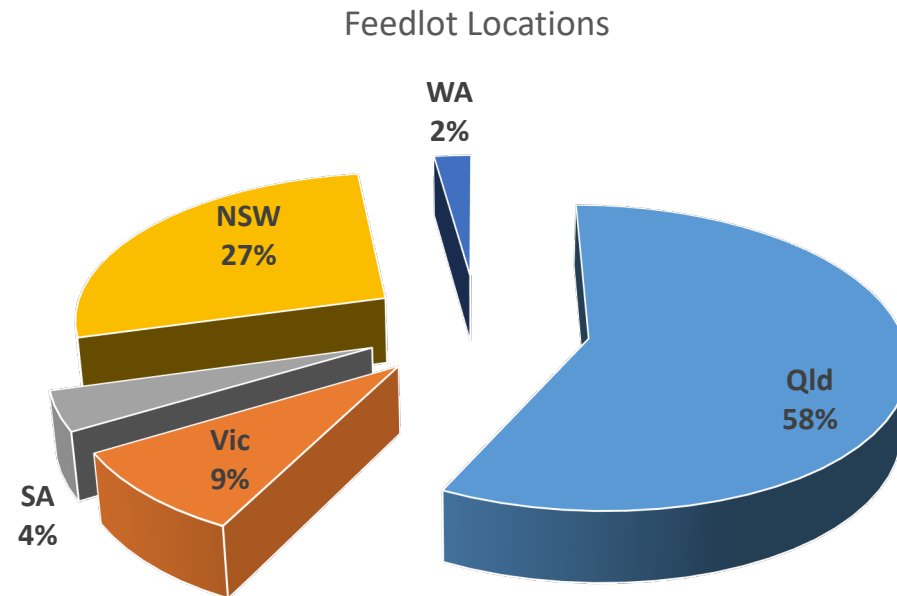
- Lot feeding is the practice of housing animals in a confined area and providing all nutritional requirements in the form of rations. It allows operators greater control over the quality and timing of supply than is possible with grass finishing, which is subject to seasonal conditions. The feedlot 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).
  - 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 as part of general farm management, particularly to maintain stock during drought and to keep stock off establishing 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.
  - Lot feeding has the potential to offer a profitable enterprise in its own right: finishing fat lambs for market. Sheep can be sent to a dedicated (off-farm) facility, or contained 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.
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# Industry Insights (continued)

- 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.
- Beef lot feeders are the final stage of production of about one third of beef cattle slaughtered in Australia. Lot feeders purchase feeder cattle from pasture raised cattle farmers for finishing before cattle are sold to abattoirs. The length of time cattle spend on a feedlot is determined by the intended market. Cattle that produce grain-fed beef products for the domestic market spend less time on the feedlot compared to those for export markets. Lot feeders typically focus on producing cattle for either domestic or export markets but not both.
- 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, the supply chain is not as closely controlled by the processing companies, and individual producers and groups (or networks) of producers often develop and service their own markets.
- There are some large corporations in the beef lotfeeding industry (the industry's largest four players are expected to account for less than 25% of industry revenue in the current year.) 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 (near Loddon Shire) from Elders Ltd.

# Key Facts: Australian Beef Lot Feeding

- Revenue \$5.4 billion
- Profit margin 12.7%
- Number of businesses: 276
- Cattle spend 50 to 120 days on average in a feedlot in Australia, which is the shortest period in the world. However, the length of time varies by market: Cattle for domestic markets usually spend a minimum of 60 to 70 days on the feedlot, while cattle that produce beef products for export markets spend 100+ days on the feedlot.



Note: In Queensland cattle are grazed over very large pastoral stations (especially in the Western channel country) and mustered by helicopter. Southern paddock grazed cattle are well 'backgrounded' for finishing.



# Lamb Lot Feeding

- A large proportion of sheep and lambs are sold to meat processors for slaughter. Australia has a well-established market for sheep and lambs. Typically, they are sold through auctions at livestock market yards throughout the country, or through paddock or over-the-hook sales. For paddock sales, a buyer or agent inspects sheep on the farmer's property and the purchase is determined by numerous factors, such as breeding, age and disease status. For over-the-hook sales, the animal is trucked directly to an abattoir without being inspected first. The price the farmer receives is generally based on the weight of the carcass. The seller typically pays for transport from the farm to the abattoir. Meat processors have expanded as a share of industry revenue over the past five years, due to strong demand for Australian meat in export markets and soaring lamb prices.
- Total lambs for slaughter revenue was \$1.485 billion in 2020-21.
- Lamb lot feeding has been, and is, far less structured than beef lot feeding in Australia, and has been infrequently operated with either permanent infrastructure or as a separate business enterprise. Most lot feeding occurs in relatively temporary containment yards within broadacre properties enabling stock to be protected and given supplementary feeding, for 'finishing', prior to sale.
- Additional options include selling lambs as stores, maintaining lambs until quality fodder crops and/or pasture are available, agistment (if available), and/or contract feeding in an established feedlot.



# Lamb Feedlot Operations

- A feedlot can be built without significant capital outlay. Well-designed temporary facilities can be built at low cost, or existing facilities may be modified to provide a suitable feedlot. Holding yards near the shearing shed can often be suitable for feedlots if they allow provision of water and shade, as they are often close to working yards, as well as feed preparation and storage areas. The greatest capital outlay when establishing a feedlot will probably be for feed troughs, feeders or hay racks. The fencing cost need only be the cost of steel posts (spaced 3–4 m apart) and lamb-proof 6-line hinge joint or ring lock fencing.
- A 14-day grain introductory period accustoms lambs to the change from pasture to grain-based diets. This time can be reduced if lambs have been trained prior to weaning to recognise grain as a feed source, and/or are introduced to the ration before entering the feedlot (lambs that are not accustomed to grain are prone to acidosis. Lambs eating relatively small amounts of grain, or pelleted ration with high starch content, can develop acidosis due to the production of high concentrations of lactic acid within the rumen). Lambs will consume around 15–20 kg of feed during this period but are unlikely to gain much live weight. Shy feeders and sick lambs should be identified during this period and removed from the feedlot. During the finishing phase of a feedlot program, an average feed conversion of 6 to 1 is assumed. Therefore, an estimated 60 kg of feed will be required to obtain a 10 kg gain in live weight.

# Breeds and Lot Feeding Systems

| Commercial Breeds for Lot Feeding in Loddon   | Lot Feeding System  |
|---|---|
| <p>Lamb: Virtually all breeds of sheep produced in Australia are suitable for meat production of various qualities, although there is a considerable difference between sheep bred for wool and those bred for meat. Cross breeding can increase lamb productivity.</p> | <p>Containment pens/yards: Lambs are finished in outdoor containment pens on a ration designed to achieve growth rate targets, or as a management strategy, such as drought feeding, security during lambing, or resting paddocks. Stock can require gradual adjustment to lot-fed rations.</p> |
| <p>Lamb: Crossbred stock for prime lamb include breeds such as Merino, Dorset, Suffolk, Texel, Coopworth, Border Leicester, Dorper, Corriedale and the relatively new Australian White.</p>   | <p>Outdoor or indoor fixed pens/yards: Lambs are grown or finished in confined spaces, on prepared feed formulations, to meet market specifications or supply continuity.</p>   |
| <p>Beef: Most temperate climate (<i>Bos taurus</i>) breeds and crossbreeds, such as Angus, Hereford, Shorthorn, Limousin, Simmental and Wagyu are used in feedlots in Southern Australian States.</p>   | <p>Outdoor or indoor fixed pens/yards. Cattle are grown or finished in confined spaces, on prepared feed formulations, to meet market specifications.</p>   |



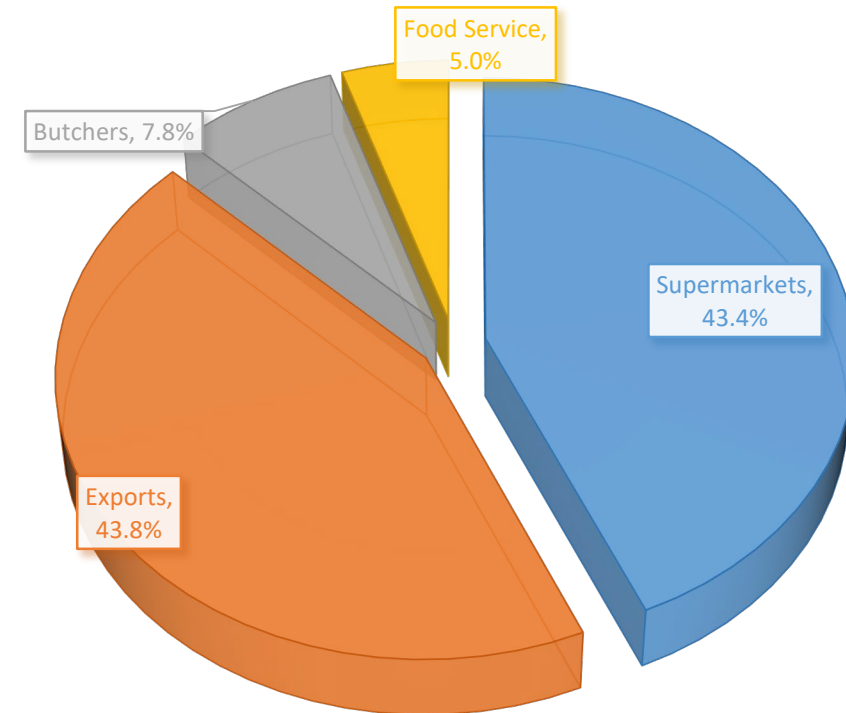
Typical Sheep Breeds for Lot Feeding



# Markets for Lot-Fed Beef

- All cattle sold by feedlots go to abattoirs for slaughter and processing into grain-fed beef products. The industry's downstream markets are therefore divided according to the channels that grain-fed beef goes through after leaving the abattoir. Each market's size represents the portion of total grain-fed beef sales to that market in volume terms.
- Approximately three-quarters of lot-fed/grain-fed beef in the domestic market is sold to the major supermarkets. Supermarkets typically demand leaner grain-fed beef, in line with consumer preferences for low-fat meat products. Demand from supermarkets remained robust throughout the COVID-19 pandemic (when food service and export sales were more problematic).
- Exports to Japan represent approximately 57% of the total volume of grain-fed beef exports. Japan has traditionally been Australia's largest grain-fed beef export market.

## BEEF LOT FEEDING MARKETS



# Establishing a Beef Feedlot

- 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. Lot feeders 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, beef lot feeders can operate opportunistically; only keeping feedlots in operation when market and operating conditions are favourable. The opportunistic nature of beef lot feeding 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.



Typical Southern Australian Beef Breeds



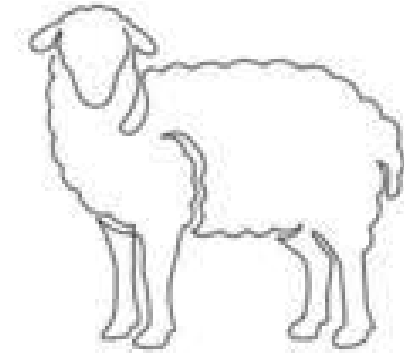
# Beef and Lamb Production in Loddon Shire and District

- Loddon Shire is a significant area for lamb production and the Loddon District (i.e. Loddon and its adjacent Local Government Areas of Bendigo, Buloke, and Northern Grampians) produce around 12% of Victoria's lamb production value, and 13% of the volume (stock).
- Beef production is less significant (3% of Victoria's stock is in the Loddon District), but the broadacre grain production in the district is of more significance for intending beef feedlot operators.
- There are 1,034 farms producing sheep and lambs in the Loddon District and 274 carrying beef cattle.

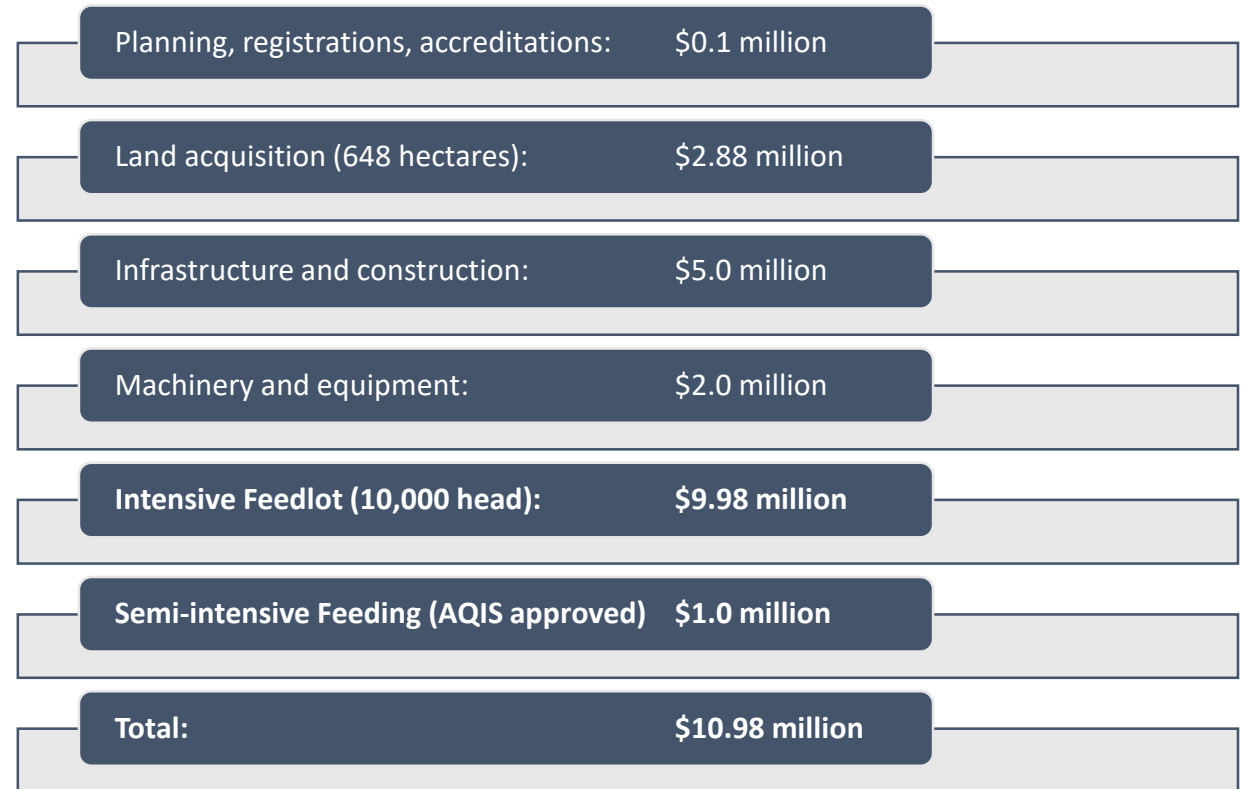
|   | Sheep and Lambs | Beef Cattle |
|---|-----------------|-------------|
| Number of Grower Businesses: Loddon District (including Loddon, Buloke, Bendigo and Northern Grampians local areas) | 1,034           | 274         |
| Stock (head): Loddon Shire  | 651,312         | 13,316      |
| Stock (head): Loddon District   | 1,572,570       | 36,402      |
| Loddon District: % of Victorian stock   | 13.4%           | 3.1%        |
| Farmgate Gross Value Loddon Shire 2015-16 (\$)  | 65,331,320      | 19,777,856  |
| Farmgate Gross Value Loddon District 2015-16 (\$)   | 151,885,420     | 34,933,909  |
| Loddon District Share of Victorian Production Value   | 11.5%           | 1.6%        |

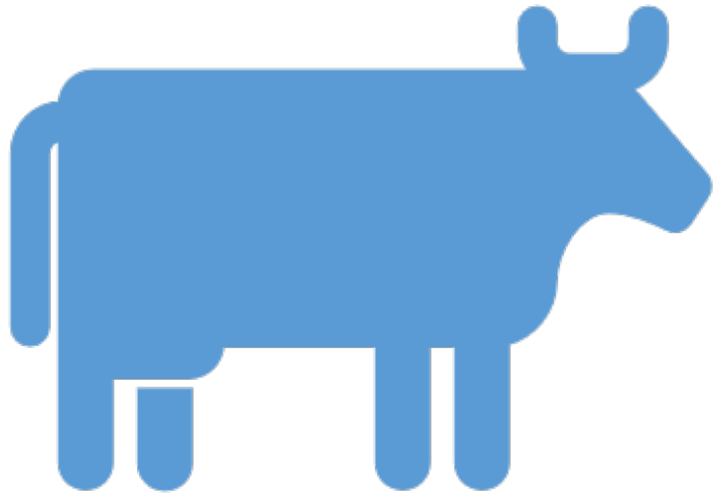
# Why Loddon Shire?

- Loddon Shire has been a base for sheep and cattle farming since the early days of European settlement. Production of wool, mutton and prime lamb, in particular, was common for many decades in complementing grain operations. Beef production has largely replaced dairying in the Shire's north. 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, Melbourne, Bacchus Marsh, Ararat, Swan Hill and Colac.
- Loddon Shire can assist in fast-tracking a purpose-built feedlot on a greenfields site:
  - The Shire offers a temperate rural environment lifestyle in Central Victoria
  - It is an agricultural hub, with diversified farming and secure water. In this location, a feedlot is likely to be an investment with long-term capital growth.
- Lot feeding operations have good prospects for growth, and locating in Loddon Shire offers:
  - Proximity to feed supplies (cereals, legumes, and oilseeds – the bulk of diet rations for quality beef and lamb)
  - Biosecurity through correct design and buffers
  - Potential for industry growth and expansion within the Shire and in the north central region
  - Availability of local suppliers in equipment and maintenance
  - Access to excellent technical services (such as veterinarians, nutritionists, and agri-systems in the regional city of Bendigo)
  - Contract processing options.



Establishment Costs:  
To secure a new  
state-of-the-art  
10,000 head beef  
feedlot asset



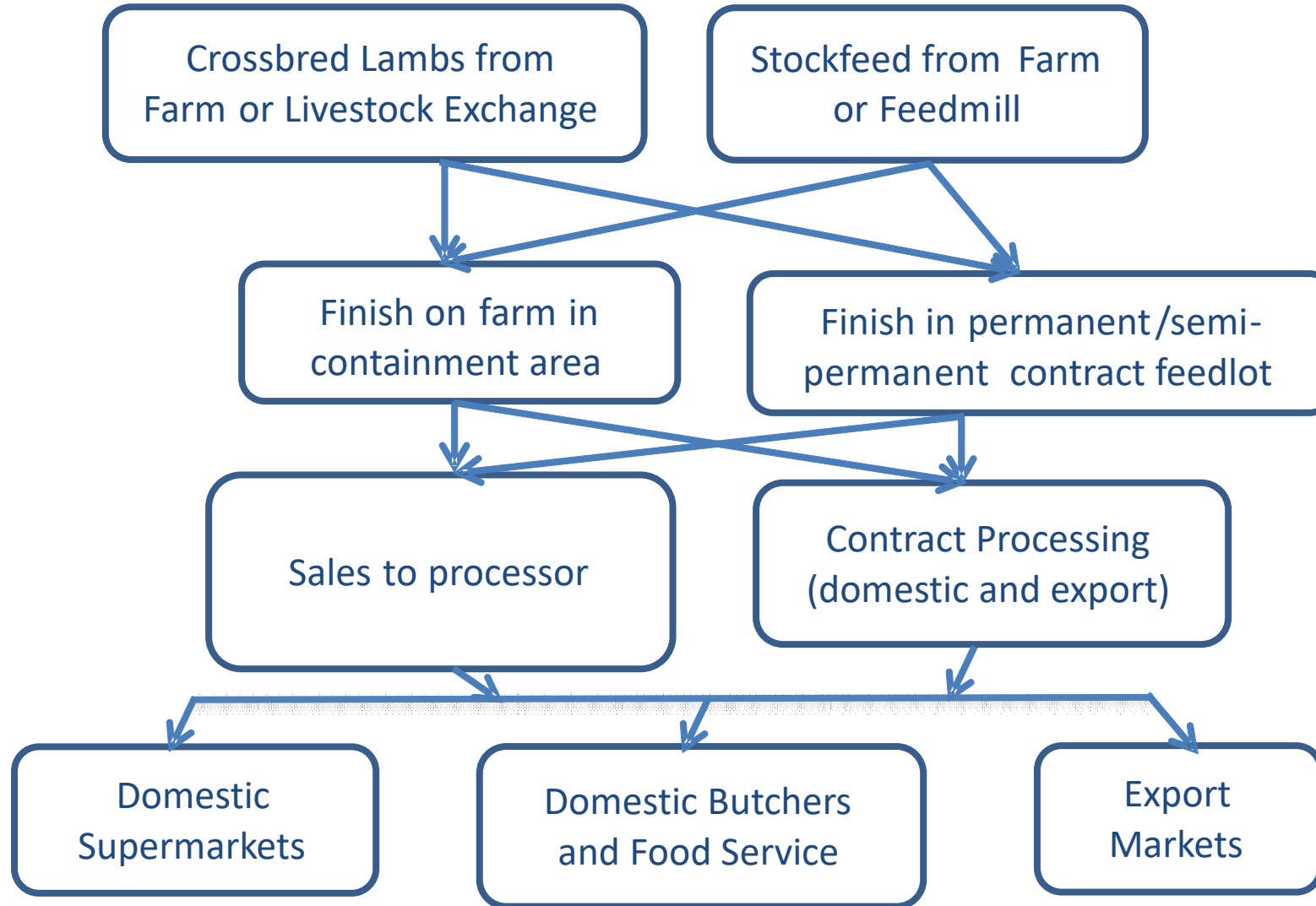


# Planning and Operational Issues

- Location and Size
  - Separation distance and number of standard cattle/lamb units
- Design and Construction
  - Pen floor preparation and drainage
  - External surface runoff
  - Laneways
  - Cattle handling yards
  - Water supply
  - Feed and water troughs
  - Service roads
- Odour and noise controls
- Traffic and parking

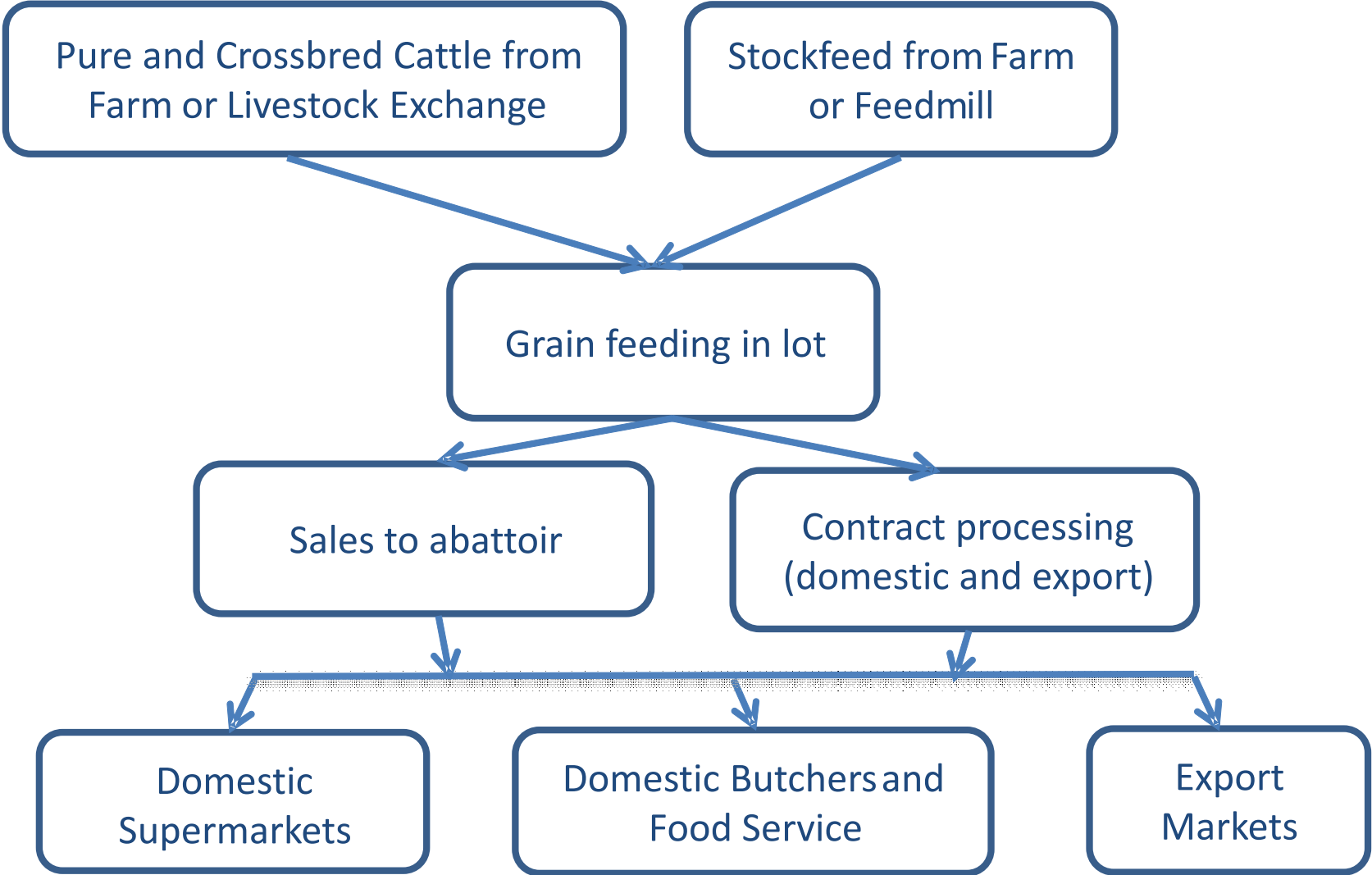
Loddon Shire Council is able to help in planning these factors, where relevant – to enable a feedlot investment to be efficiently established.

## Typical Lot Fed Lamb Supply Chains





**Typical Lot Fed Beef Supply Chains**



# INFORMATION SOURCES:

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- Meat and Livestock Australia (2012), National Guidelines for Beef Feedlots
- CSIRO (2006) PISC Report 89, Model Code of Practice for the Welfare of Animals: The Sheep
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- Street Ryan (2014) Wimmera Southern Mallee Intensive Livestock Mapping
- DPI (2008) FSA Consulting, Wimmera Mallee Pipeline Project: Lamb Feedlot Site Suitability Study
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- Primary Industries and Resources SA (1997) Feeding Sheep: Includes Lot Feeding and Drought Management
- Agriculture Victoria (1994), Easton, WS, Opportunity Lot Feeding of Lambs

# How can we help?

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- Contact Loddon Shire's Economic Development Team for advice and support with your lot feeding enterprise. Our team can help with:
  - Identifying sites
  - Supply chain referrals and introductions
  - Seeking relevant State or Commonwealth Government assistance
  - Information to use in feasibilities or business cases
  - Working through planning and building permits
- Call or email Loddon Shire:
  - [business@loddon.vic.gov.au](mailto:business@loddon.vic.gov.au)
  - Phone 03 5494 1200



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