

Buloke Intensive Livestock Investment Guide

# Volume 3 - 2017 **Pig Meat**

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TYPES OF COMMERCIAL	GROWING	DESCRIPTION
BREEDS	SYSTEMS	
Landrace, Large White, Duroc crosses. Traditional breeds (such as Berkshires and Wessex Saddlebacks) are used in some free range operations	Free range	Allowed access to outside range each day with shelter or shedding available. If the pigs rely on foraging and grazing for more than 50% of nutritional requirements, the piggery is classed as extensive (rather than intensive)
Landrace, Large White, Duroc crosses.	Outdoor Bred Raised Indoors on Straw	Sows are kept outdoors to free range standards and piglets are free ranged until weaning and then grown indoors on deep litter straw.
Landrace, Large White, Duroc crosses.	Sheds or Ecoshelters	Pigs are accommodated in conventional or deep litter housing, and often in pens within the sheds at stocking densities of an average of 0.5 square metres for a growing pig and 3.2 square metres for a sow and litter.

#### DISCLAIMER

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### **BULOKE AND THE PIG INDUSTRY: OVERVIEW** Why Buloke Shire? Buloke Shire Council is actively seeking to attract investment in intensive pig production, and related business activities, to the Shire.

Opportunities for pig production are re-emerging after considerable re-structuring of the industry over the past 20 years. The number of pig farmers in Australia has declined steadily for the past 60 years, from nearly 50,000 in 1960 to just 1,909 in 2012. The number of breeding sows has however been relatively stable, indicating that piggery size has steadily increased and is now at an average of about 170 pigs. The 1980s and early 1990s were periods of consolidation for the pig meat industry. It was also the period that marked the end of the era of no frozen pork product importation. In the years since that time, exports have fallen, the number of pig producers has reduced, there has been considerable consolidation among processors, and importation of pig meat has risen dramatically. Over the past five years imports of bacon, ham and other smallgoods rose at a rate of 23% per annum.

Until the 2000s, few growers had a contract arrangement with a pork processor. Most were independent growers with an established breeding herd (although in practice most of these supplied pigs to a single processor on a regular basis), and their pig production enterprises were usually a complementary activity to other farming enterprises. Industry restructuring (through acquisitions, mergers and rationalisation), the introduction of a phase-out period for sows in stalls, and import competition have all contributed to reductions in both the number of growers and the proportion of independent growers.

The pig industry has become dominated by major processing companies. These organisations represent about 5% of all operators in the industry, but account for about 60% of industry production. 'Corporate pig farms' tend to have more than 500 sows. Some vertically integrated firms, such as George Weston Foods, also operate in ham, bacon and smallgoods manufacturing. About 30% of farms are contract growers and the remaining 65% of producers are small producers (generally less than 100 sows) who produce pigs in addition to other primary production, such as grain growing.

Buloke Shire has been a base for pig farming for many years. There were over 90 growers involved in breeding and raising pigs at the start of the twenty-first century (in 2001) but this number had reduced to 16 in 2015. There are currently no businesses or facilities in the district for value-adding beyond the farm gate. Major processing plants are in Melbourne, Echuca, Murray Bridge, Corowa and Port Wakefield.

Buloke's climate, grain growing farming base, and the ability to provide sufficient distances between piggeries, waste disposal areas and dwellings make it a great location for pig production.

Buloke's communities are generally supportive of pig farming, understanding that it complements grain growing and helps to drive the economy, add to local diversity, and provide new local jobs. Land prices for pig farming operations could be expected to be around \$2,500 per hectare (or \$1,000 per acre) with very few sales of properties less than 80 hectares.

There is no minimum herd size requirement to become a pig farmer and there are some very small producers, although the average herd size is 170-180 pigs. The size of the piggery will usually be determined by whether the piggery is the main farm 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.

If entering this industry is of interest, please contact James Goldsmith, Economic Development Officer at Buloke Shire Council who can answer many of your queries and provide further information and specific contacts in the pig industry.

#### SECURING A POSITION IN THE SUPPLY CHAIN

Knowing who the farm will supply is critical, and securing a contract, or a channel to market, should be clarified as a first step by any intending investor.

Before considering sites and requirements to become a grower, an interested investor must consider where they expect their business to be positioned in the pig industry supply chain. The three main pig production supply chains are:

- Integrated processor operations (fresh meat processors and processors/smallgoods manufacturers), which contract to growers.
- Independent growers selling to meat processors, specialty retailers (butchers) and food service outlets.
- Opportunistic or 'spot sellers' to processors.

An intending farmer also needs to decide whether to breed and grow pigs, or just grow pigs, and whether to look for a point of difference (such as brand, breed type, free range, or organic). Both growing and marketing may be done independently or with a group of producers or in alliance with another sector such as a processor. Four basic pig sizes may be marketed:

- $\geq$ Baconers: 50 to 105 kg dressed weight
- $\triangleright$ Porkers 30 to 50 kg dressed weight
- $\geq$ Stores 25 to 40 kg liveweight
- Weaners 15 to 25 kg liveweight.

#### **Pig Production Systems**



#### DAY TO DAY MANAGEMENT

Pigs need a dry bed, and protection from extreme temperature and sunburn. There are minimum requirements for shedding space (and open ranging, if relevant), fresh air, hygiene, access to feed and water, and accommodation.

The pig production system timetable is approximately:

Breeding (natural and/or artificial insemination) 1 week

	Breeding (natural and/or artificial insemination) i week	
-	Gestation	16 weeks
	Farrowing	2-5 weeks
	Weaning	2-10 weeks

Growout/finishing

10-25 weeks.

Labour is an important resource for seven day per week piggery businesses.

- For breeding and growing operations, the requirement tends to be one person for 100-200 sows and their piglets. This depends on the amount of automation at the site (e.g. feeding systems, whether ready-mixed feed is used and if pig delivery and other tasks are done by others). One person with part-time help is the most common system on piggeries with up to 150 sows.
- For 'pig growing only' farms, one person full time, with casual or family help, can generally manage about 4,000 grower pigs with automated feeding.
- In rotational outdoor piggeries, the pigs are kept in paddocks, sometimes with open deep litter shelters or basic huts. The paddocks are rotated with a crop-forage-pasture phase. These piggeries operate under site specific conditions and have different environmental risks than conventional and deep litter systems. They tend to have smaller herds and can also be managed by a single operator, family unit, and/or with part-time help.

Casual labour is often used in both breed-to-finish and grow-out units of any size when other farm enterprises require attention, for weekends or holidays and for specific tasks such as loading and sorting pigs and cleaning. Labour costs may be 20-30% higher in deep litter housing systems because bedding needs to be added and spent litter needs to be removed.



For a breeding herd, 'pigs weaned per sow per year' is the main performance indicator, and for a growing herd the kilograms of meat sold is fundamental. Critical management success factors for a piggery include:

- Containing costs
- Meeting mating targets, with good genetics
- Keeping sheds occupied
- Selling stock at optimum weights
- Efficient use of feed, with no wastage
- Optimise animal health.

For a new intending operator, some managerial skills and a previous history with livestock, are an advantage. Accredited training courses and literature (both books and electronic website information) on pig keeping are readily available.

#### **Buildings and Growing Environment**

An intensive piggery investment requires sufficient capital for construction of buildings, equipment installation, stock, feed, labour and operating expenses until the first sales are made (at least five months, and up to 11 months, depending on the purchase and sale age).

The type of housing is related to the production system and this influences the capital required. Shedding options generally include traditional tin shedding and, the less costly, polythene covered 'eco-shelters'.

Pigs can be kept in paddocks, but still require protective shelter and such a system tends to have a higher labour requirement with different skills, and production may be less efficient (with more feed required per unit of meat produced). Outdoor production is better suited to areas with reasonably well drained soil (although not free draining into the water table, or heavy clay), preferably with rain spread throughout the year. Separate housing or other areas are generally provided for pigs of different ages because of their different feed and climatic requirements and to assist in maintaining herd health levels. Housing designs are available from companies specialising in piggery construction.

Long, narrow buildings are cooler in summer and warmer in winter if the long axis runs from east to west. Pig sheds should be situated to take advantage of prevailing winds for coolness in summer. Conversely, ventilation openings should be protected from prevailing winds in winter. This can be achieved by planting selected trees in a shelter belt that does not interfere with airflow required for cooling in summer. Shelter belts have the added benefit of enhancing the appearance of the piggery; softening its visual impact. They can also affect the physical environment by effectively increasing the surrounding temperature in winter and reducing it in summer.

#### Markets

Australian pig producers have increasingly moved into porker production over the past decade, due to competition from pig meat imports, which has reduced the domestic demand for baconers. The industry has benefited from rising pig meat consumption and, although consumption of processed pork products is greater than that of fresh pork, fresh pork consumption is rising at a faster rate.

Vertically integrated companies in meat processing and marketing, like Rivalea and Pastoral Pork, and/or meat and smallgoods processing operations, like George Weston Foods (which encompasses KR Castlemaine and Don Smallgoods), are responsible for a large proportion of Australian pig production.

Medium meat processors and butchers account for the second-largest market. The number of growers in this market has declined and growth has been slower than the big, integrated processors as they are less competitive, and the number of growers supplying this segment has declined. However, as fresh domestic pork meat sales grow, butchers are likely to increase their pork purchasing, especially if they have an added marketing feature (such as regional branding, free-range or other perceived quality attributes). As well, butchers are likely to innovate with value added pork products and speciality lines to create a point of difference from supermarkets.

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 pork.

An indicative pig industry supply chain for Buloke Shire is presented in Figure 1. Note, the dotted lines indicate no presence in the Shire and the solid lines indicate a presence in the Shire.



Figure 1 Buloke Shire Pig Industry Supply Chains

#### Major Businesses in the Regional Supply Chain

Food Investments Pty Ltd (wholly owned by UK Company Associated British Foods) operates in the pig industry through its subsidiary George Weston Foods (GWF). GWF is a diversified food processing company with interests in flour milling, baked goods, flour, milled goods, animal feed and smallgoods. The smallgoods businesses are KR Castlemaine and Don KR. Through its purchase of KR Castlemaine, GWF operates three piggeries in South Australia and two piggeries in regional Victoria at two sites, Girgarre (Campaspe Shire) and Bears Lagoon (Loddon Shire), both just east of Buloke. The two Victorian properties house up to 35,000 pigs. The Girgarre property is a breeder farm and the Bears Lagoon site is the grow-out operation for KR Castlemaine. There is no longer a pig abattoir in Castlemaine, where the facilities are now entirely smallgoods and value adding focused. Pigs are processed at Big River Pork in Murray Bridge, South Australia.

JBS Australia Pty Limited is a foreign owned Australian proprietary company. The company is owned by the Brazilian company JBS S.A., which entered the Australian market by acquiring Swift Australia Pty Ltd JBS Australia is involved in a range of meat production in Australia. The company owns five feedlots and 10 meat processing facilities across Queensland, New South Wales, Victoria, South Australia and Tasmania. Following the ACCC's clearance in early 2015, JBS purchased the Primo Group, a leading producer of smallgoods and owner of the Port Wakefield pork processing plant.

CEFN Pty Ltd, which was established in 1940. The Queensland-based business has diversified interests in pig breeding, share farming and commercial building construction. CEFN also provides artificial insemination services for competing piggeries. The company has about 4,000 sows across three breeding sites near Clifton in Queensland, with another 4,000 sows in commercial production. CEFN supplies genetically improved stock to growers in the Pyramid Hill/Yarrawalla area.

Rivalea Australia: Hamsdale Australia Pty Ltd, through Rivalea (Australia) Pty Ltd, is Australia's largest pig producer. In 2012 it ranked 964 in Australia's top 2,000 companies. Hamsdale Australia Pty Ltd owns Rivalea, which in turn is wholly owned by Singaporean company QAF Limited. Until July 2009, Rivalea operated under the name of QAF Meats Group. Hamsdale Australia also has an 80.0% interest in Diamond Valley Pork Pty Ltd, which operates as an abattoir and boning business in Melbourne, and is the processor for several pig growers in the Loddon Mallee region.

Suppliers to the Loddon Mallee regional pig production industry include: Stockfeed

- Ridley Agriproducts, St Arnaud
- Reids, Colbinabbin
- Coprice

- Bunge/Rivalea, Corowa (sell feeds commercially as well as product for Rivalea corporate growers)

- Systems and Equipment
- Redpath Ideal, Bendigo (the original manufacturer of pig eco-shelters)
- Jacksons, Murray Bridge
- Mike Anderson, Bordertown

Since the 1990s, new commercial scale pig farming enterprises have been adopting multi-site production, all-in/allout management with split-sex and phase feeding systems. The use of deep litter housing to adopt these systems and in expansion programs has allowed the capital cost of construction to be approximately halved. Shed costs vary considerably but weaner sheds are in the order of \$50 to \$60 per pig place, grower–finisher sheds at \$100 to \$120 per pig place and dry sows up to \$250 per sow place.

#### SITE AND INFRASTRUCTURE REQUIREMENTS

The following notes relate to suggested 'ideal' land and infrastructure for a pig farming operation. 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.

#### Site

Piggeries do not need to be sited on highly fertile land, but are often operated in, or near, grain growing areas which

are accessible to processors. Non-compatibility with urban development has tended to reduce the tradition of having piggeries located near markets in metropolitan- rural fringe areas (which was common until the late twentieth century). The piggery site needs to be accessible by road and have access to electricity and water. The site should be flat or preferably gently sloping for improved drainage. Separation from existing piggeries and roads on which pigs are transported reduces the risk of new diseases being introduced.

A flat site is best, away from waterways, lakes and flood prone areas. Valleys and areas enclosed by thicker vegetation can be suitable, depending on the microclimate and odour dispersal characteristics. Free range sites need available grazing land to accommodate free-ranging densities.

Piggeries need to be sited at a minimum separation distance to avoid interfering with life both on-site and off-site. The available land area needs to be large enough for the piggery buildings and for effluent and waste disposal (such as spreading on land used for crops or conversion to bio-energy)<sup>1</sup>, and to accommodate future feed-mixing facilities and piggery expansion, although piggery waste may be taken to other sites.

The size of the unit will generally be in multiples of what one person or family can manage as well as whether there are other tasks on or off farm. Unit size may also be influenced by environmental requirements (such as area for spreading effluent, distances to houses), shed space available on the property, and by the load size of trucks.

The proposed piggery may need to employ part- or full-time labour, or be managed differently (e.g. on a large batch system with events such as farrowing happening every five weeks instead of continuously or weekly). If either the piggery or existing farm enterprises operate less efficiently, overall income may suffer. Modest capital investment in the other farm (or off-farm) enterprises may lift total income more economically than a larger sum required to establish a piggery. Personal skills and knowledge must also be considered. A small piggery is vulnerable at times of low returns, but the total farm income may be balanced by other enterprises. Economies of scale improve with increasing unit size, but there may be a limit to economies of scale; production efficiency (such as pigs produced per sow a year) is not necessarily better on larger units.

#### **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.

Buffer distance guidelines include:

- Piggery operations (from the perimeter) to be at least 800 metres from a major water supply and 25-100 metres from a watercourse (depending on the method of effluent and by-product discharge)
- Separation distances for community amenity are determined by a formula which calculates the distance as a function of the number of pig units multiplied by design, siting and terrain factors

#### Neighbours:

The Victorian code of practice suggests a separation distance of no less than 200 metres from a public road, no less than 100 metres from residence (on the property), and no less than 3,000 metres from a neighbouring piggery.

#### Access:

Sealed bitumen road access is preferred. 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 pigs to drink and for wash down purposes. An allowance of 75 litres per day per sow with litter (55 litres for drinking and 20 litres for wash down) should be the minimum provision (with a potential actual use range of 55-320 litres). Weather conditions, type of housing and effluent management can make the difference within this range. Research by Australian Pork has determined the average daily consumption for each class of pig as:

Weaners 3 litres/day

<sup>&</sup>lt;sup>1</sup> These waste disposal activities might be transferred to another site off-farm

-	Growers	5 litres/day
-	Finishers	6 litres/day
-	Dry sows	11 litres/day
-	Lactating sows	17 litres.

A poor water supply can lead to slower growth rate, more urinary infections, and lower feed intake among lactating sows (impacting on body condition).

#### 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.

#### **CASE STUDY 1: CONTRACT PRODUCTION PIGGERY**

## This case study is based on a real grower who has been growing pigs since the early eighties and the piggery has increasingly become the mainstay of their broadacre property.

This is a reflection on their years in the pig industry. "Back in 1983, we started growing pigs to drought proof the business and, although we still produce wheat, barley, canola and chick peas, the piggery has been the saving grace of our farm."

They have developed a well-defined role for their piggery; a specific function which they perform efficiently and with careful attention to quality. The farm does not manage sows nor any breeding program. They grow and select breeding stock on behalf of one of the large integrated pork companies, by receiving weaner gilts at three weeks of age and growing them to 16 weeks. The best gilts (usually around 40%) are selected for breeding and the balance (60%) are grown-out as heavy porkers. The piggery also grows 80-100 young boars, for selection as breeding stock by a veterinarian (for artificial insemination).

The piggery covers a land area of 4 hectares with an original shed (90 metres x 10 metres) housing about 1,100 gilts plus 13 eco-shelters (8 are 9.1 x 45 metres and 5 are 6 x 34 metres) the larger sheds housing 400 young gilts, but the numbers are thinned/separated as they grow larger. They believe their configuration of sheds for weaners and grower

combinations provides maximum flexibility to meet the needs of the processing company. The piggery runs 4,500 pigs as standard practice, but has capacity for up to 7,500. The farm has a water allocation from the Wimmera Mallee pipeline of 16 megalitres, but only uses about 4 megalitres of this in a typical year. Formulated feed rations are supplied by the processing company.

The farmer works full time on the farm enterprises, of which the piggery has grown to about two-thirds of the total with one part time worker, and they also employ a full time Piggery Manager. They are pleased with their piggery and take pride in the production system that they have helped develop over more than thirty years in the industry and see a bright future ahead for their farm and the pig industry in Victoria.

#### Summary of features of contracting:

- Production and financial risks are shared
- Grower contractors provide land, sheds, and labour
- Integrated Company provides pigs, feed, transport, medication, technical advice, and assists in securing permits and approvals.
- Expansion can be achieved with less capital investment from the contractor
- It should provide a stable income for the grower (returns are not market-driven).

"We are committed to the pig industry and believe our operation makes us an important cog-in-the-wheel (of the supply chain). A few years ago we sold 800 acres from our landholdings to increase the investment in pigs".

#### CASE STUDY 2: HYPOTHETICAL GROUP HOUSING SYSTEM<sup>2</sup>

Tom and Todd Granite have recently purchased a broadacre property of 800 hectares near Dumosa, which has been used for pig production for over 25 years. The Granite brothers invest in a new group housing system involving building modifications and new technologies.

The production system has a 550 sow nucleus breeding herd which produces breeding gilts for the owners' main commercial unit. Surplus pigs are transferred to a grow-out site at approximately eight weeks of age. The new owners have selected 'electronic sow feeders' as the group housing system, with dynamic groups of 120 sows.

An existing shed of 72 metres x 9.6 metres was converted. It was previously a naturally ventilated, partly slatted finisher shed flushed with fresh water with a floor area of 72m x 9.6m. Some of the finisher pens had been demolished prior to the decision being made to convert the building to dry sow accommodation. The building was 25 years old. The decision was made to convert the building to hold 360 sows in groups of 120, fed through two ESF's per group in pens of 24 metres x 12.4 metres. Buloke Council approved the widening of the building to 12.4 metres, and Environmental Protection Authority (EPA) approval was also obtained. To assist in sow selection and movement to and from the dry sow area, a 1.5 metres passage running the length of the building was installed on one side. The extension on the other side incorporated a sleeping area with block barriers and dividers to allow sub groups to be established within each large pen.

Other building considerations included:

- Manually operated fans with a demister for sow comfort in summer.
- Sprinklers were installed over the slats to encourage sows to vacate the area around the feeder and use the solid concrete lying bays provided. In addition, the sprinklers provide extra cooling during summer.
- For effluent management, the roof was extended to cover the additional floor area. The existing floor was replaced with a fully slatted floor flushed with recycled water.
- Electronic sow feeders were provided for each group of 120 sows. The feeders allow the feeding of two diets and liquid dosing of micronutrients.

The feeder allows selected sows to be diverted into the sow movement lane running the length of the building. Sows required for treatment, and sows due to be moved to the farrowing pens can be identified and or selected with little or no stress. In each pen there are three lying areas, 7.71m x 5.85m deep with block wall divisions at the opposite side of the building to the feeders and movement lane. Within each lying area is a division wall, subdividing each pen. The lying areas are escape areas for timid sows and opportunities for sub-groups to be established. The pens provide 2.02 square metres per head for the dynamic groups which are formed by the introduction of 30 sows every fourth week. Pen 1 receives 30 sows in weeks 1, 4, 7 and 10. Sows due to farrow are removed in week 13 (89-93 days of gestation) allowing the new group of served sows to be introduced. Pen 2 is filled in weeks 2, 5, 8 and 11, and sows are removed in week 14. Pen 3 is filled in weeks 3, 6, 9 and 12 and sows are removed in week 15. Between each group pen is a boar pen 3m x 2m adjacent to the movement lane which assists in the identification of returns to oestrus.

The owners spent considerable time with training sows and the staff to adapt to the system.

The costs include the modification to the building including base work, structural modification, feeding system, other equipment and furnishings, and labour.

Item	Cost per sow
Base work	\$276
Structural modifications	\$228
Furnishings and fittings	\$61
IT/Electronics and electrical	\$34
Feed stations	\$219
Labour	\$32
Total	\$850

Sourced from Australian Pork Limited solely for informational purposes (and should not be relied upon for any operating or investment decisions).

<sup>&</sup>lt;sup>2</sup> This example is largely sourced from Australian Pork's Group Housing Systems Case Studies (June 2012)

Benefits of the Group Housing System:

- Sows are socialised and housed in groups
- Sows receive individual feed rations according to their condition

- The technology enables identification and selection to implement management decisions.

Operating issues associated with this system:

- There is reliance on computer technology.
- Sow aggression is likely within groups
- Slat quality needs to be high to avoid feet problems
- Technical support needs to be readily accessible
- Training animals to the system takes time.
- An ongoing rodent control policy is necessary to avoid frustrating cable damage.



#### FINANCE

#### Land and Buildings

Larger farm allotments make it easier to obtain smooth permit approvals, through meeting the industry requirements and lessening any potential for objections. For a start-up operation, a property of at least 80 hectares is desirable, and suitable land in Buloke could be available for around \$2,500 per hectare.

The building cost for an intensive piggery (contract-built using new materials) is estimated at \$6,000 per sow place for a unit that breeds and grows the pigs to baconer weight (excluding land and livestock), depending on the style of housing.

#### **Operating Costs**

#### **Grow-out Herd**

Indicative costs for raising a herd of 1,500 pigs from weaners to a target weight of 75 kilograms dressed weight are:

Operating Costs	
Feed costs	\$196,500
Labour	\$73,500
Other costs	\$43,500
Use of Capital Equipment	\$33,000
Total	\$346,500

#### **Breeding and Grow-out Herd**

Performance assumptions:

- Litters/sow/year: 2.2
- Born alive per litter: 11
- Herd live weight feed conversion efficiency: 3
- Growth rate: 600 grams/day
- Deaths (10% piglets, 2% weaners, 1% growers).

Indicative operating costs, with the above assumptions, for a 100 sow piggery, are:

Operating Costs	
Animal health	\$45,760
Utilities	\$21,736
Feed	\$640,642
Labour	\$171,601
Equipment Usage	\$57,200
Other Costs	\$205,921
Total	\$1,142,860

#### Returns

Current returns on piggery operations are around 13-20% of annual operating costs.

#### **MAP OF BULOKE**



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#### STATUTORY REQUIREMENTS

#### Planning Permits issued by Local Council

The Model Codes of Practice for the Welfare of Animals include codes referring to pigs 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 commercial poultry enterprise as there are a myriad of rules and regulations that need to be followed.

A lay person can do this, however experience shows that it usually takes considerably longer and mistakes made during the process end up adding to the cost of the project by at least ten percent compared to engaging a consultant in the first place. Planning permits must be applied for if you are planning to farm any number of pigs 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.



#### **Building Permits**

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

Building permits cannot be issued for a pig shed 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 piggery 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.

ISSUES	CHECK
Applicant details	
Site description (including plans) and assessment	
Real property description	
- land tenure	
- land area	
- cadastral plan	
Land zoning, and zoning of the surrounding land	
Climatic data	
- median annual rainfall	
- average monthly rainfall	
<ul> <li>rainfall intensity data (1-in-20-year design storm, 1-in-20-year</li> <li>24-hour storm)</li> </ul>	
- average monthly evaporation	
- monthly maximum and minimum temperatures	
- Wind speed and direction	
Soil description for the piggery complex site (including analysis of basic physical properties) and reuse areas (including analysis of basic chemical and physical properties)	
Description of groundwater resources and geology of the site	
- details of any bores on the subject property	
<ul> <li>analysis of the chemical properties of groundwater for use in piggery</li> <li>details of any licenses held</li> </ul>	
Description of surface water resources on the property or in the vicinity of property	
- Analysis of the chemical properties of surface waters for use in piggery.	
- Details of any licenses held	
Description of the current vegetation of the site and the extent of any proposed clearing	
Identification of any items, sites or places that may have cultural heritage significance	
Description of the proposed piggery operation	
Total pig or standard pig unit (sPu) numbers	
- herd composition	
- numbers and weights of incoming and outgoing stock	
- sources of stock	
Description of housing and layout plans	
Water requirements for drinking, cooling, cleaning and shandying with effluent, and water sources and quality	

Bedding requirements and bedding sources	
Feed requirements, sources and storage areas	
Staff numbers	
Hygiene practices	
Prediction of manure production and mass balance estimate of the nutrient	
content of solid and liquid by-products	
Design of effluent collection, pre-treatment and treatment system, including plans	
Sizing and proposed management of the reuse areas, including location,	
area, method, frequency and general management of spreading/irrigation	
activities	
mortalities	
Calculation of traffic numbers and consideration of access and road safety. there	
is also a need to negotiate with state or territory	
and local governments regarding road upgrading and maintenance	
responsibilities	
Community amenity impacts - particularly odour dust poise traffic calculate	
separation distances to sensitive receptors	
Surface water impacts – quality and availability for other potential users	
Groundwater impacts – quality and availability for other potential users	
Vegetation impacts – effects of clearing on rare and threatened species and	
Summary of design and management features to minimise adverse	
environmental impacts	
Proposed environmental monitoring and reporting	
Environmental Management Plan (EMP) - an EMP focuses on the general management	
of the whole farm, taking into account the environment and associated risks. it should	
document design features and management practices; identify risks and mitigation	
for continual review and improvement	
Plans including:	
Topographic plan - showing watercourses and drainage lines; flood lines,	
protected land; and location of nearby residences	
<u>Recent aerial photograph</u>	
proposed carcass compositing or burial site; proposed reuse areas; on-farm roads;	
location of on-farm bores; and location of any soil conservation or drainage works	
Piggery complex layout plan - including location of by-products treatment	
and storage facilities	
Ejjiuent treatment ponas plan - (ii applicable)	
Separation and buffer distances plan - showing location of piggery complex (including feed storage; and by-products storage and treatment facilities) and	
reuse areas; and distances to sensitive land uses e.g. houses and towns, as well	
as buffers around sensitive	
	I

natural resources

Planning checklist derived from the National Environmental Guidelines for Piggeries, Australian Pork Ltd.

#### **FURTHER INFORMATION**

Research

Australian Pork Ltd (producer owned industry peak body) http://www.australianpork.com.au Phone: (02) 6285 2200





**Pork Cooperative Research Centre** Australian Pork Cooperative Research Centre http://www.porkcrc.com.au/ Phone 08 8313 7743

Pig Improvement Company (breeding and technology company) http://www.picaustralia.com.au (02) 6956 2105





CEFN (genetics and breeding company) http://www.cefn.com.au/ Phone: (07) 4697 3344

#### **FURTHER INFORMATION**

**Processing Companies** 

**Rivalea** Australia http:// www.rivalea.com.au Phone (02) 6033 8333



**Otway Pork and Pastoral Pork** http://www.otwaypork.com.au/ Freecall: 1800 664 166 or Phone 03 9394 0999

**Riverside Meats** http://www.riversidemeats.com.au Phone (03) 5480 6387



George Weston Foods Ltd trading as KR Castlemaine and Don Smallgoods http://www.krcastlemaine.com.au http://gwf.com.au Phone (2) 9815 7300

JBS Australia and Primo Smallgoods Phone (02) 9742 0000



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