



Investing in lamb finishing in the Wimmera Southern Mallee

DRAFT

Background

Over the past 10 years, the Wimmera Mallee Pipeline (WMP) project has been conceived, designed and then progressively constructed and commissioned.

To build upon the improved water security, the Department of Primary Industries (DPI) Victoria has identified options, developed tools and prepared documentation to enhance awareness of sustainable regional development opportunities for agribusiness.



This sub project focuses on defining the potential for vertically integrating the lamb industry and servicing specialist markets. It is the first step in a planned approach to promoting new sustainable agribusiness strategies.

Step 1



Prepare a detailed analysis of a defined investment strategy.

Step 2



Identify potential investors and provide copies of the analysis.

Step 3



Support enquiries and provide direction to specific advisory services.

Step 4



Assist value chain development and joint venture strategies. Establish the industry.

Project Area

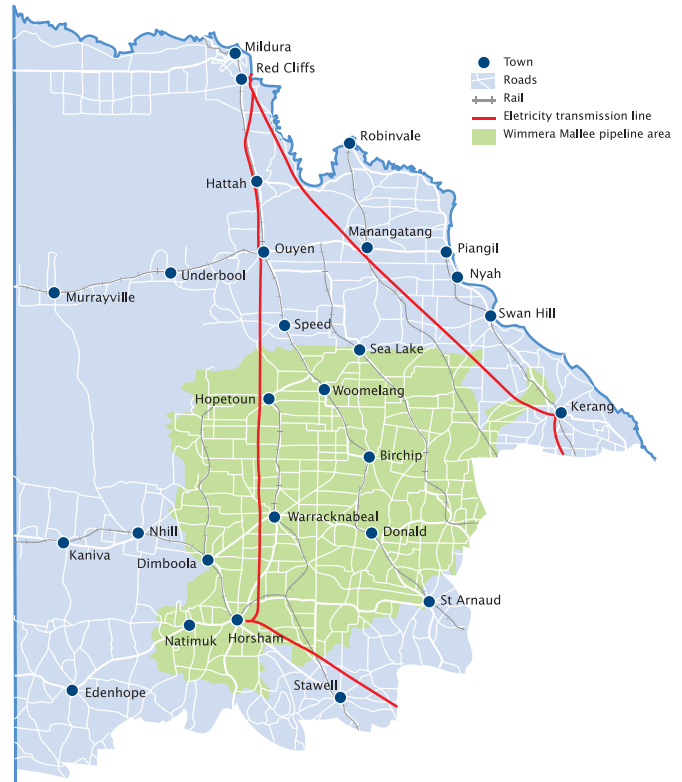
The WMP is located in north western Victoria, half way between the Southern Ocean and the Murray River.

The region's climate is characterised by normally hot and dry summers with occasional storm events. Winter is relatively cool, with the most effective rainfall occurring between June and November. Average rainfall is 450mm and average evaporation (Epan) is 1600mm.

Under forecast climate change, rainfall will decrease and evaporation and mean temperature will increase.

Farming practices are dominated by broadacre dryland cropping based on wheat rotated with other cereals and crops such as canola and pulses. Farm sizes vary from a larger group of small holdings (600 to 800 ha) to a relatively few large businesses (>5,000 ha).

The major service centre is Horsham with Mildura, Ballarat, Warrnambool, Bendigo and Swan Hill within 3 hours drive.



Area serviced by the Wimmera Mallee pipeline

Strategic assumptions

Whilst lambs are able to be sourced from a very wide area, the high value point of the value chain is in the feeding and finishing. With a well developed grain production industry backed by the WMP, the Wimmera – Southern Mallee region is ideally placed to be the hub of an integrated lamb investment. This has therefore been modelled.

The major assumptions in this investment analysis are:

- The potential investment is based on 'steady state' production as at February 2011. They do not capture business start-up issues or the cyclical nature of seasons and markets.
- The models for the 'finishing' operation are for a separate but integrated 'business' associated with four typical existing farm businesses found in the Wimmera – Southern Mallee region.
- The commercial hub of the total business is to be based with the finishing operation.
- Only those businesses with advanced management skills (top 25%) are likely to achieve the performance levels required for commercial sustainability as adopted for this exercise.
- Site, situation and people specific development strategies will need to be addressed for each investor.
- The required water delivery rates and volumes through the WMP are reliable under climate change.
- All pricing to be at estimated long term trend values to minimise influence of booms or busts.
- All farm operations are carried out by contract or contract use of own machinery held as separate business

Business structural assumptions

The primary aim is to centre each component business operation within a region with optimal commercial benefits and risk minimisation.

Breeding Operations



- Pastoral holding/s in western New South Wales (NSW) or northern South Australia (SA) able to carry over 10,000 ewes.
- Around each holding to be a cluster of contracted breeders and feral goat harvesters.
- The property is managed by contracted neighbour
- Supervision is provided by an overall manager

Key Budget Parameters

- Average rainfall is 447 mm and water use efficiency is 20 kg/ha/mm for wheat as a benchmark.
- Crop rotation is wheat - barley - canola - pulse
- Lambs and goats fed to grow at >250 g LW/day.
- WMP water is supplied at a cost of \$0.80 /KL for the base allocation and \$1.00 /KL for all extra water
- Land is valued at \$4,250/ha. Assumed site is in the Northern Wimmera and within reach of Horsham and WMP water.

Finishing Operations



Business Hub

- As part of a Wimmera Mallee farming business.
- Receive animals from breeding operation and also buy from open market.
- Background before intensive finishing.
- Finish in intensive feeding facility to specification.
- Managed by overall manager.



Wheat is the major cereal crop grown in Victoria

Meatworks Operations



Could by-pass for direct live export

- Receive all animals from finishing operation.
- Slaughter to agreed standard and method.
- Package to specification.
- Export final product.

Budgeted scenarios

Whilst the model will test many scenarios, the focus for this exercise has been to adopt four (4) typical Wimmera – Mallee farm businesses as commercial hubs and scale overall operations around each typical hub.

The bases for the modelled scenarios are:

Baseline – current operations for typical 1000, 2000, 3000 and 4000 ha broadacre farms

Per 1000 ha Wimmera Mallee farm used to finish stock from pastoral properties -

- join 12,000 to 15,000 ewes to terminal sires on pastoral lands (SA or NSW)
- provide rams to contract join a total of 10,000 ewes on nearby cluster holdings
- capture 6,000 to 8,000 feral goats per year
- Buy extra lambs and goats on the open market to optimise turnover for the finishing operation.

All feed grain produced on each farm is sold to the finishing business on that at open market prices. Any extra feed needed to be purchased externally.

Baseline investment analysis

The baselines provide the benchmark for comparing the potential commercial gains for each business scenario.

Table 1: Financial parameters for the baseline investment

Wimmera Mallee scenario	Capital (\$M)	EBIT (\$M)	EBIT Yield (%)	IRR (%)
1,000 ha	6.43	0.12	1.9	4.5
2,000 ha	11.40	0.52	4.6	8.0
3,000 ha	17.00	0.81	4.8	8.2
4,000 ha	22.25	0.99	4.4	7.9

Source: Modelling by Booth Associates. Printed copies of completed models available on request from DPI Victoria.

Definitions:

EBIT - Earnings Before Interest and Tax (= debt free profit)

IRR - Internal rate of return. Assumed 10 years between business establishment and sale.

The data indicates the efficiency of operations which accrue to well managed operations with business critical mass – >\$8.0M to >\$10.0M.

The modelled business outcomes are consistent with other top 25% similar businesses.

Breeding investment analysis

There many options for providing surety of supply of a core number of lambs to the finishing operation. Options include leasing, outright ownership, joint venture and contracted supply arrangements.

For risk management, control over associated contracted suppliers and a more assured and regular access to harvested feral goats, the ownership option has been adopted and structured as follows:

Pastoral holdings in western NSW and northern SA where scale is available, the skill base is on livestock management, there is no competition from enterprises such as cropping and the relatively low capital base per breeder ewe.

The steps assumed for this breeding investment analysis are:

- Purchase a property or group of properties on a value for money basis with access to local management skills.
- Assume significant capital expenditure on water, fencing, working facilities to optimise management.
- Reach a contracted arrangement with suitable adjacent or nearby cluster of properties to breed extra lambs and capture feral goats.
- Each owned property to be to be lightly stocked and lambs removed early at say 35kg LW. Light stocking will buffer drought, grow lambs faster and increase feral goat harvest
- Pastoral property to be operationally managed by neighbour under the overall business manager.
- Overall manager to have a light plane for regular and best management control.
- Provide rams to lock in cluster lamb producers.

The physical outputs assumed are:

Table 2: Physical output from breeding operation

Wimmera Mallee scenario	Pastoral Operation	
	Lambs Produced (n)	Goats Harvested (n)
1,000 ha	14,300	6,000
2,000 ha	25,100	12,000
3,000 ha	49,700	20,000
4,000 ha	66,200	30,000

Source: Modelling by Booth Associates. Printed copies of completed models available on request from DPI Victoria

Lambs produced are the sum of own breeding plus cluster properties (net of losses).

The commercial performance for the breeding operation associated with each of the assumed business 'hubs' is:

Table 3: Commercial performance of breeding operation

Wimmera Mallee scenario	Capital \$M	EBIT \$M	EBIT Yield (%)	IRR (%)
1,000 ha	13.30	1.13	8.5	14.1
2,000 ha	28.30	2.53	8.9	14.7
3,000 ha	42.80	4.04	9.4	15.3
4,000 ha	56.25	5.19	9.2	15.0

Source: Modelling by Booth Associates. Printed copies of completed models available on request from DPI Victoria

Observations on the breeding business analyses are:

- An efficient average of \$775 of total capital is invested per joined ewe because no weaner ewes or other growers are being carried.
- The assumed 10% lighter stocking rate than normal will be under-pinning a relative secure lambing rate, a relatively assured supply of defined quality lambs and will encourage the migration of feral goats to the breeding property for harvest and forwarding.
- The assumed management structure, cluster arrangement and overall operations strategy has resulted in higher than usual EBIT's, EBIT yields and IRR's.
- The relatively small differences in EBIT yields and IRR's between differing scales of operations is a reflection of the management strategies adopted and the efficient ratios between business gross margins and gross revenue.

Finishing Operations Analysis

This operation is the core enterprise within the assumed integrated business. The efficiency of movement of animals through this facility, the efficient conversion of feed to meat and the constant supply of animals against contracted specifications and will determine the success of the overall business.

There is need for managerial mobility (aircraft), employment of and dependence on key professionals, to contracted buyers and on-site staff to ensure sound relationships with the ultimate buyers.

A satisfied market is the ultimate aim with all points of the value chain benefitting from a full track and trace system.

- The assumed production levels are summarised below:
- Existing farm operations continue with “sale” of grain to on-farm finishing business.
- There will be a minor reduction in farmed area due to the construction of the feedlot and associated supporting infrastructure.
- Buy extra lambs and goats in open market to add to breeding operation sources.
- Background animals on region property/s under contract before intensive finishing.
- The assumed level of open market purchases of additional lambs and feral goats is evident in the following table where the annual feedlot turnover is 125% to 150% higher than the lambs sourced from the associated breeding operations. The feral goat turnover is 70% to 100% higher due to other open market sources.

Table 4: Physical output from finishing operation

Wimmera Mallee scenario	Lambs Finished (n)	Goats Finished (n)
1,000 ha	33,800	11,000
2,000 ha	75,300	22,000
3,000 ha	120,600	40,000
4,000 ha	145,800	50,000

Source: Modelling by Booth Associates. Printed copies of completed models available on request from DPI Victoria

In some instances, the eventual consumer may prefer a lesser finished animal than a fully feedlot finished product. In which case, there will need to be an adjustment in the nature of the analyses.

The following table summarises the commercial assessment of a fully feedlot finished product after a significant period of backgrounding on contracted regional properties in the Wimmera Mallee region.

Table 5: Commercial assessment of feedlotting

Wimmera Mallee scenario	Capital (\$M)	EBIT (\$M)	EBIT Yield (%)	IRR (%)
1,000 ha	7.65	0.21	2.8	5.6
2,000 ha	14.00	1.26	9.0	13.0
3,000 ha	20.45	1.74	8.5	13.0
4,000 ha	27.25	2.02	7.4	11.5

Source: Modelling by Booth Associates. Printed copies of completed models are available on request from DPI Victoria.

The key outcome of the commercial assessment is the increased returns achieved from value-adding of farm generated grain. This is especially so after a reasonable business critical mass has been achieved which appears to be at or >2,000 ha farm businesses. The apparent decline for the 4,000ha Wimmera Mallee business is more a reflection of the relative level of traded lambs and goats assumed for this exercise.



Meatworks Investment Analysis

There are a small number of abattoirs located in the project region, some with the required approvals to operate but in need of repair or upgrade. Reliable data on the ownership and operation of these meatworks is difficult to source and when available, it is limited and deemed commercially sensitive.

Projections for this detailed modelling are at best a fair estimate and caution is needed in interpreting the data and outcomes.

Additional investigations will be required for a more detailed site, situation and client specific appraisal.

The analysis strongly suggests that it would be preferable to contract kill rather than own an abattoir unless there is a definite need to have absolute control over the slaughter (for example, Halal) method.

Table 6: Commercial assessment of meatworks investment

Wimmera Mallee scenario	Capital \$M	EBIT \$M
1,000 ha	7.50	0.29
2,000 ha	10.00	0.96
3,000 ha	11.00	2.86
4,000 ha	12.50	1.76

Source: Modelling by Booth Associates. Printed copies of completed models available on request from DPI Victoria

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Legal considerations

A significant lamb and goat feedlot development will need to be in accordance with local government planning guidelines.

Please consult with the relevant shire along with the Environmental Protection Agency (EPA) Victoria for appropriate management of odour, effluent and other potential environmental matters.



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For more information about Wimmera & Southern Mallee go to www.thewimmera.com.au or phone the Wimmera Development Association (03) 5381 6503