



# final report

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## Sheep Industry Business Model Development

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## Executive Summary

The Sheep industry business model development project was initiated to examine business model innovation for the Western Australian (WA) sheep meat industry. At least four business models taken from 'Concepts for alternative investment and financing models to expand sheep production in Western Australia' by Tamara Alexander were examined to determine the opportunity and risks of commercialising each model.

Given the variety and complexity of the models in the Alexander report, it was agreed that a composite of the four models be developed that would address issues of economies of scale, farm productivity improvement, capital attraction and new value chain design. This model would provide a practical use of the Alexander report concentrating on what was commercially achievable and providing an example for the industry to move forward with.

Selected from the Alexander report as being able to address the report objectives of economies of scale, productivity, capital attraction and new value chain, were joint venture finance, a vertically integrated company model, livestock leasing and pasture development.

Extensive research and interviews were carried out across all sectors of the sheep industry. Interview results included farmers needing price increases and enforceable contracts, processors running their plants below capacity and being unwilling to offer contract kills as they believe it threatens their livestock supply. This is in sharp contrast to the positive view that demand is greater than food products supply by 10% annually in the Middle East and Asia.

The fundamental problem the sheep meat industry in WA has is that producers' returns are insufficient and unsustainable, reducing production volumes and testing industry viability. The challenge for the industry is to adopt change and cut costs in the supply chain, allowing more of the retail dollar to flow back to farmers to stimulate production. With this in mind, the model was developed after prioritising what was required and identifying potential sources of capital essential for industry growth. The report has been reviewed by selected industry participants.

Capital is limiting industry expansion. This report details how Joint venture financing coupled with off-take agreements, warrants serious consideration. Joint venture finance is now funding expansion in meat processing and marketing of Bindaree Beef Group. We also review how Australian Fresh Milk Holdings is using JV funding to expand production of its unique a2 milk products, with similar benefits applicable to the sheep meat industry. Coles is actively considering financially helping farmers invest in bigger scale operations after signing a 10 year off-take agreement with Sundrop Farms for truss tomatoes.

Farmers current access to capital for flock expansion is limited and expensive. Sheep leasing based on the "Cowbank" model offers real possibilities for rapid flock increases to stimulate production. This innovative livestock leasing model if applied to Western Australia could conserve farmer capital of almost \$200m over 10 years and reduce livestock financing expenses.

The vertically integrated company model is suitable for the major Australian supermarket chains, foreign State owned enterprises, foreign retailers or any combination of the above. It gives the greatest opportunity to cut costs out of the supply chain. However, existing processors must embrace specialist marketing to maximize returns. A sustainable competitive advantage incorporating quality, traceability and cost efficiency is essential. Also vital for future success is a collaborative relationship up and down the supply chain.

Foreign investors are actively researching opportunities in the WA sheep meat industry. The vertically integrated company structure addresses the major concerns of foreign investors including sustainability, live export risks, climate change, quality and pricing issues. A stand-alone example was developed showing that the model is competitive with current prices into SE Asia and the Middle East. It allows control of the entire productive process where the end users requirements can be planned well in advance, especially quality and product type.

Perennial pastures development is an example of local comparative advantage that has massive potential for the grazing industries in Western Australia. Perennial pastures sown in the Central West and South Coast of WA could utilise low value land (unsuited to cropping) and boost pasture productivity by 300% on average compared to annual species. In the example developed, sowing 500,000 ha returned \$91.7m net/annum over 5 years with a 10-year net benefit of \$258.5m (excluding land Return on Capital) using returns generated from the sheep meat industry. Even after development costs, this land would cost less than 50% of comparably productive grazing country in Victoria or the south west of WA.

In summary, the vertically integrated model using Joint Venture finance meets the objectives of economies of scale, farm productivity improvement, capital attraction and new value chain design. Existing processors are ideally placed to adopt all or parts of this collaborative model to expand and grow the WA sheep meat industry. Identifying the areas in the supply chain where more of the retail dollar can be retained is an essential step towards passing it back to farmers, thereby growing the industry.

It is recommended that a financial model be prepared to assess the financial viability of the integrated business model on a high level basis. This financial model will reflect the broad capital requirements (both investment and working capital) and the expected timing of cash flow and returns to producers and investors. The key benefit to the industry is to demonstrate if the potential returns to investors are higher than that returned under the existing industry structure, as well as, if the potential returns are sufficiently high to attract the required funding.

It is also recommended that Industry and Government initiate and support talks with the investment industry to facilitate new investment flows into agriculture. It is hoped that a report such as this may provide the first step to opening dialogue and the provision of finance to facilitate agricultural growth of the sheep meat industry.

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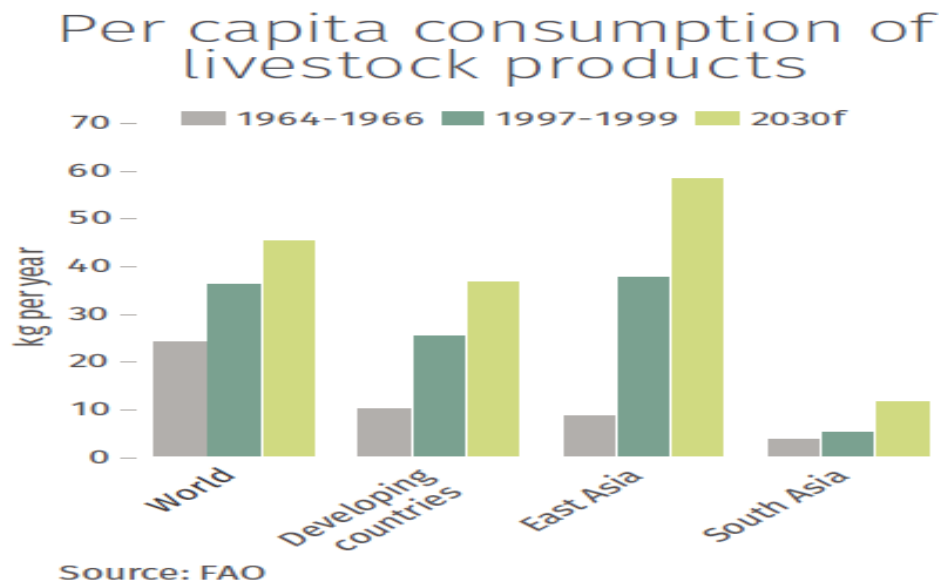
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# 1. Background

## The future

The global outlook for sheep meat is very positive, with indicators of rising long term demand including:

- An estimated 76% increase in protein is required in the next 35 years <sup>1</sup>
- GDP growth in developing Asia <sup>2</sup> due to the rise of the middle class will boost livestock product consumption (see graph below)
- Given that global agricultural demand is expected to grow between 1.1% and 2.6% /annum over the coming decades, productivity growth will struggle to keep up.<sup>3</sup>
- Global food prices are expected to remain high (in the absence of significant improvements in productivity) as land and water constraints intensify.<sup>4</sup>
- Prices will also become increasingly volatile as delayed supply responses create timing misalignments with rapidly changing market opportunities. This increased volatility is expected to cause sub-optimal investment decisions, which could further impede production increases.<sup>5</sup>
- Meat & Livestock Australia forecast growth of lamb exports at 19% and mutton at 11% over the next 5 years to 2020<sup>6</sup>. If we assume an annual 13% food import growth or 65% to 2020<sup>7</sup> of Asia and the Middle East, we have a deficit of 46% for lamb and 53% for mutton of demand unrealized. It would appear unlikely that any exporting country could fill this demand and therefore product substitution and significant price rises will occur.



<sup>1</sup> Alexandratos N, Bruinsma J (2012) 'World agriculture towards 2030/2050: the 2012 revision.' (FAO: Rome)

<sup>2</sup> Coriolis research, 'Growing the North: Market opportunities for irrigated agricultural produce from northern Western Australia'

<sup>3</sup> Agricultural Insights Greener Pastures report issue 3 Port Jackson Partners 2012

<sup>4</sup> "OECD-FAO Agricultural Outlook 2012-2021", OECD, 2012

<sup>5</sup> "Policy Report on Price Volatility in Food and Agricultural Markets: Policy Responses", OECD, 2011

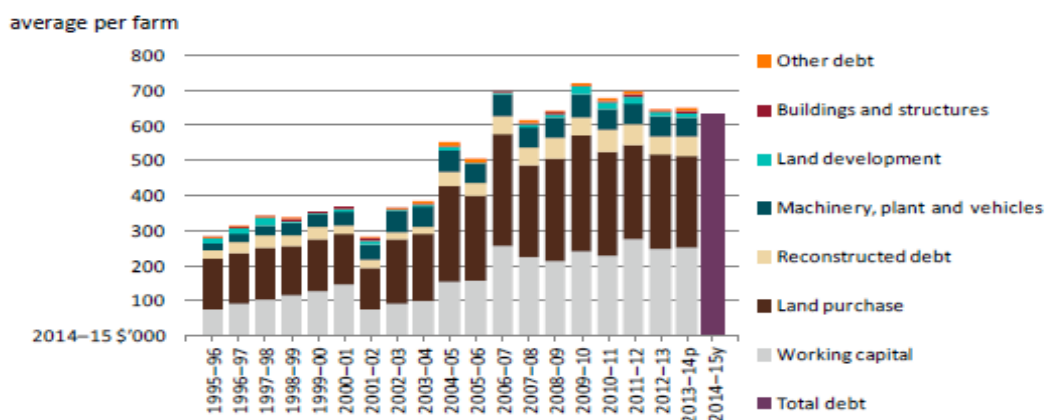
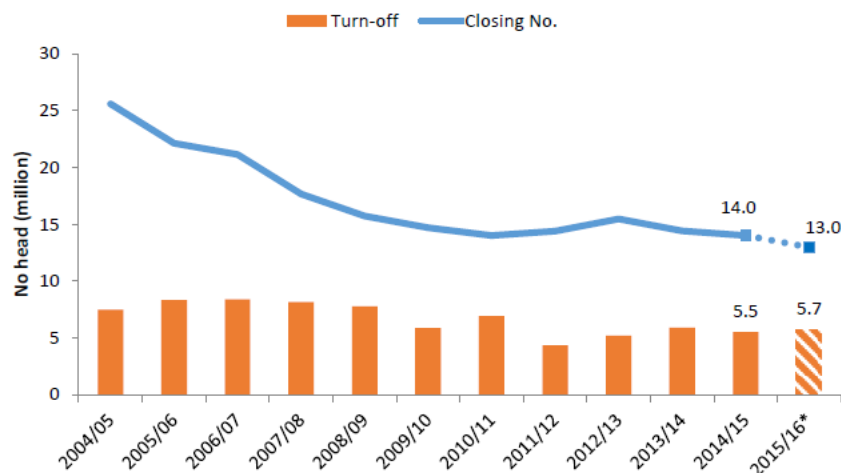
<sup>6</sup> MLA's Market information & Industry insights Australian sheep industry projections 2016 – April update

<sup>7</sup> Compound annual growth rates Asia and Middle East - UN FAO std database Coriolis

## The present

There has been a continual decline in West Australian flock numbers, from a high of 38.4 million in March 1990 to an estimated 13.0 million in July 2016.<sup>8</sup> with the breeding flock estimated at 7.53 million in July 2015. There are a number of factors causing this long term downward trend in flock numbers: -

- Low industry confidence
- Insufficient returns – a lack of profitable contracts available
- Climate change; unreliable winter rains, more variable summer rain
- An ageing farmer population, with an average age of 53, 25% of which are over 65<sup>9</sup>
- Australia slaughter lamb producer average farm debt of approximately \$600,000<sup>10</sup> (refer graph below) limiting expansion capability.
- A low acceptance of sheep farming by the younger generation.
- Cropping seen as less risk, higher return, more reliable and less work.



p Preliminary estimate.  
Source: ABARES Australian Agricultural and Grazing Industries Survey

<sup>8</sup> K Pritchett "Sheep Notes 4" DAFWA April 2016

<sup>9</sup> ABS Australian social trends 4102.0 December 2012

<sup>10</sup> Source: ABARES Australian Agricultural and Grazing Industries Survey

### Continuity of supply is becoming more important than price

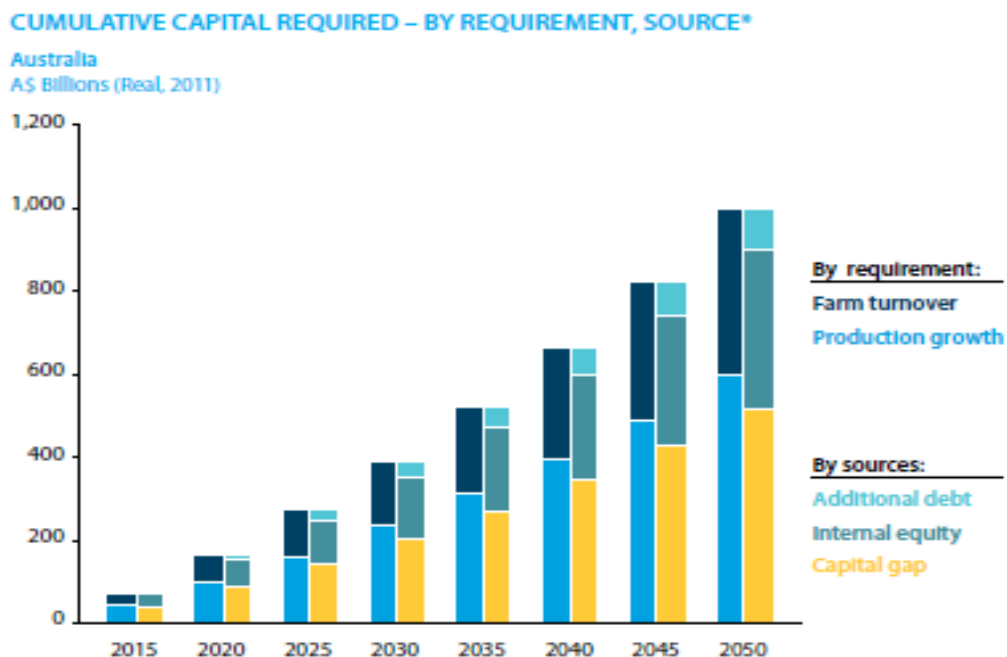
The June 2011 live export ban by the Australian Government sent shock waves through the world as apart from threatening the food security of Indonesia, it crippled the Australian beef industry, sending many broke and others are still recovering some 5 years on. The boom and current bust of the Dairy industry is a classic example of supply chain continuity being compromised. These price shocks are having generational impacts on farming families, scaring off capital and seriously threatening industries survival and growth expectations.

Continuity of supply becomes a strategic consideration, especially to nations unable to feed themselves. National interests are served by having product available, albeit at higher prices, rather than a rollercoaster price and a stop/start availability situation. Only Australia and New Zealand have the capacity to significantly increase sheep meat exports.

### Capital constraints are preventing growth of value and volume

Substantial growth-oriented capital is needed in Australia and New Zealand over the coming decades. For both countries to grow agricultural exports, around A\$600 billion and NZ\$210 billion in additional capital will be needed on farms and supply chains between now and 2050, respectively. A further A\$400 billion and NZ\$130 billion will be needed to support older farmers exiting the sector, allowing the next generation of farmers to buy them out.

However, traditional sources of finance for farmers, debt and retained earnings, are insufficient: (refer capital gap in graph below) In addition to replacement capital, historic data suggests that Australian and New Zealand farms have the capacity to spend around 12% of revenues on growth-related capital expenditure. While this may allow for modest production growth, it is insufficient to support the maximum growth potential of both countries, let alone support farm turnover.<sup>11</sup>



<sup>11</sup> Agricultural Insights Greener Pastures report issue 3 Port Jackson Partners 2012

## 2. Objectives

The Sheep industry business model development project was initiated to examine business model innovation for the Western Australian (WA) sheep meat industry. At least four business models taken from 'Concepts for alternative investment and financing models to expand sheep production in Western Australia' by Tamara Alexander were examined to determine the opportunity and risks of commercialising each model.

These models were to be analysed for their suitability of achieving economies of scale, farm productivity improvement, capital investment attraction and new value chain design. Projections of productivity and profitability over a 5-10-year period along with timelines and potential costs of implementation were to be examined whilst also noting constraints and opportunities of implementing such a model.

Given the variety and complexity of the models in the Alexander report, it was agreed that a composite of the four models be developed that would address achieving economies of scale, farm productivity improvement, capital investment attraction and new value chain design. This model would provide a practical use of the Alexander report concentrating on what was commercially achievable and providing an example for the industry to use in the way forward.

## 3. Methodology

### 3.1 Analysis of the Alexander Report

The Alexander report examined the following models:

Alternative finance and management structures

- Co-operative farming
- Release capital and expand farm business – sell, lease back & expand
- Replace debt with equity
- Leasing options – stubble, marginal cropping land, salt land pastures
- Contract lamb production
- Joint Venture (JV) with investor
- Long term contracts along supply chain
- Livestock leasing ('ewe bank')
- Contract out sheep management

Alternative options to add or create more value from sheep

- Commercial feedlotting
- Add processing and marketing
- Access premium markets by establishing a structure for niche sales agents/brokers/marketing companies to operate
- Franchising
- Dedicated supply chain from paddock to plate



#### Potential investor group structures/investment models

- Investors establish a Research & Development (R&D) company
- Community investing (akin to community banking) using superannuation
- Set up syndicates to invest in farm enterprises
- Equity partnership trust

The key findings of the Alexander report include: -

- Buoyant market signals for the sheep industry
- Multiple sheep management options
- Multiple financing and capital raising
- Potential new business models to value add
- Structures to source and pool capital for investment
- Success will require increased sheep and business management skills
- Success will require better collaboration, commitment and communication
- Success will require the right match of partners.
- Every farm business is different

Government and Industry bodies were approached including:

DAFWA, Austrade, MLA, IWAA - InvestWest Agricultural Alliance SILC - Sheep Industry Leadership Council

#### Interviews

Interviews were carried out with representatives of the following;

- Sovereign wealth funds / Corporations
- Meat wholesalers
- Primary producers
- Government
- Industry bodies
- Livestock agents
- Abattoirs / Exporters
- Finance / Investment

A full list of interviewees is included in the Addendum.



## 4 Results

### 4.1 Interviews: Summary Points

To enable a broad and balanced view of the current state of the sheep industry, multiple interviews were conducted over several months, from all sectors in the industry. A diverse range of opinions were given, in some cases contradictory, reflecting the complex and wide range of factors that make up the industry. The results are summarized below.

#### Meat End User:

##### Middle East North Africa

- Sheep meat is the culturally preferred meat of the Middle East.
- Australian sheep meat has an excellent quality reputation.
- Australian sheep meat is often under-priced on a quality basis.
- Buyers aware of reducing mutton volumes, tightening of supply
- Price, quality, supply is the predominant purchase decision sequence
- Sea transport offers huge freight savings compared to airfreight but reduced shelf life on arrival. Airfreight is expensive but maximizes shelf life.
- The live export trade has risks of supply continuity

##### South East Asia

- V&V Walsh/Grand Farm project is the first chilled sheep meat into China. Additional access for chilled meat may be possible under China Australia Free Trade Agreement but subject to political considerations.
- China's current policy of only importing frozen meat protects local sheep meat producers
- The majority of State owned food suppliers are commodity traders, not interested in quality issues or value adding. Niche markets are future possibilities.
- The Chinese market is only now recovering from a glut of Mongolian sheep 18 months ago which depressed prices.
- Difficulties in access, e-commerce and niche marketing restrict opportunities
- Malaysia has stringent Halal criteria which can impact Australian processing.

#### Sheep Producers

- Current prices are generally insufficient to increase production
- WA livestock contracts are not enforceable (compare to 2-3year grain contracts)
- Prices are highly variable, producers can't budget with confidence
- Many have lost money feeding out of season and now sell light lambs without feed costs to preserve profitability
- Climate change is shrinking available land.
- Younger generation generally more attracted to cropping
- Cropping properties, not sheep, attract corporates investment.
- Cropping simpler, less work, less labour intensive, generally higher return than sheep

### Sheep Industry Leadership Council (SILC)

- Declining sheep numbers - Situation Critical
- Contracts historically unenforceable
- New commercial sized models are required, especially feedlotting
- Innovative thinking is needed around funding and marketing

### Livestock Agents

- Big investment focus on cattle and grain
- Increase in sheep prices not improving confidence
- Multiple factors for sheep decline
- Non-enforceable contracts a problem
- New commercial models required to improve return to producer

### Abattoirs

- Falling production hurting the industry, abattoirs keen to see industry turn-around
- Multiple reasons for decline
- All abattoirs in WA running under capacity
- Large abattoirs generally do not offer a contract kill service
- Cannot consider set or future contracts – variable factors including currency exchange, global competition, seasonal unknowns; not feasible for either farmer or abattoir.
- Global competition keeps the price down.

### Austrade

- Agri-business is a key area of growth and Austrade focus.
- Focus on projects - large scale and investment ready.
- Large overseas mining companies are seeking to enter the agricultural sector.

### Finance

- Global interest in large scale Australian projects.
- Projects above \$100 million targeted
- Investors want proven business models, experienced management, competitive advantage and solid track record
- Broad gap of sophistication between financial markets and farming in the 'investor ready' process.
- Low risk appetite, high level of due diligence essential.
- Positive about the potential for the sheep industry.
- Multiple investment drivers including food security, residency and financial return.

### Summary from the industry

- The current price and lack of long term contracts for producers in WA inhibits future production.
- Multiple reasons for farmers withdrawing from sheep production
- Young people are not being attracted to the industry

- Processing companies do not offer a reliable contract kill service, therefore removing independent marketing options.
- The current 'paddock to plate chain' has multiple links, with each link adding complexity and cost to the final product
- Economies of scale achieved with broad acre cropping is hard to replicate in sheep
- Institutional capital is readily available for agriculture, but almost exclusively for large scale low risk organizations.
- The concept of 'investment readiness' is not agreed or shared.
- Information networks are not clear, information is often guarded
- A collaborative state-wide investment conduit for agricultural investments is critical.

## 4.2 Model development

"In a supply chain, the product moves from the producer to the consumer, but the price mechanism works in reverse," says Gerard van Empel, Managing Director Rabobank's South African development arm. "The consumer pays a price, everyone takes a profit and whatever is left goes to the farmer."<sup>12</sup> If this broadly reflects our current supply chain system, it is hardly an adequate model for supply continuity.

"The Asian agricultural and food production sectors produce mass product at low cost. That is not our future. Our future is in high quality product" says Dr Ken Henry the former Secretary of the Department of Treasury from 2001 to 2011 "There is a role for Australian businesses in securing niches in global supply chains and indeed in regional supply chains closer to home, through partnerships that are built on trust, mutual respect, and focussed on quality, reliability and safe product"<sup>13</sup>

To overcome the constraints of the current market supply/demand model, a parallel model is proposed focussing on supply and sourcing new capital. It also includes Dr Henry's key points. Our model incorporates;

- Forecast demand is robust <sup>14</sup>
- The model must guarantee reliability of supply.
- A product of superior quality will be produced.
- A superior quality product will justify a premium price.
- Overseas customers are currently paying premium prices for quality products.
- The product must be safe.
- Capital to develop new projects will be difficult to source.

The report objectives were listed and compared to the models reviewed in the Alexander report. A matrix was then developed (refer following page) to determine which models could be combined to produce a commercially attractive model.

In section 2 of the Matrix, additional tests were added to ensure supply continuity. Essential to any project was the ability to process its own product as there is no reliable regular contract kill available in Western Australia. In addition, production off-take agreements are essential will be readily embraced as supply and demand continue to diverge.

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<sup>12</sup> African Investor May2012

<sup>13</sup> A fresh look at Australia in the Asian Century Dr Ken Henry NAB Corporate Finance Insights February 2014

<sup>14</sup> (refer Introduction P5)

Decision Model Matrix		Key questions - Does the model provide:			
Section 1 - Initial tests	Economies of scale across industry	Productivity increase	new capital introduced	new value chain design	
The Alexander report examined the following models:					
Alternative finance and management structures					
• Co-operative farming	N	N	N	N	N
• Release capital and expand farm business – sell, lease back & expand	N	N	Y	N	N
• Replace debt with equity	N	N	Y	N	N
• Leasing options – stubble, marginal cropping land, salt land pastures	Y	N	N	N	N
• Contract lamb production	N	N	N	N	N
• Joint Venture (JV) with investor	Y	Y	Y	Y	Y
• Long term contracts along supply chain	Y	Y	N	Y	Y
• Livestock leasing ('ewe bank')	Y	N	Y	N	N
• Contract out sheep management	Y	Y	N	N	N
Alternative options to add or create more value from sheep					
• Commercial feedlotting	Y	Y	N	N	N
• Add processing and marketing	Y	Y	Y	N	N
• Access premium markets - niche marketing	Y	N	N	Y	Y
• Franchising	N	N	N	Y	Y
• Dedicated supply chain from paddock to plate	N	N	N	Y	Y
Potential investor group structures/investment models					
• Investors establish a Research & Development (R&D) company	N	N	Y	N	N
• Community investing (akin to community banking) using superannuation	N	N	Y	N	N
• Set up syndicates to invest in farm enterprises	N	N	Y	N	N
• Equity partnership trusts	N	N	Y	N	N
Favoured options - must introduce new capital and have industry wide application					
Section 2 - Additional tests for Supply continuity					
• Joint Venture (JV)	off take agreements	buy abattoir	long term contracts	branded	
• Long term contracts along supply chain	Y	n/a	Y	n/a	
• Livestock leasing ('ewe bank')	n/a	n/a	Y	n/a	
• Commercial feedlotting	Y	Y	Y	Y-grain fed	
• Add processing and marketing	Y	n/a	Y	Y	
• Access premium markets - niche marketing	Y	n/a	Y	Y	

To make the model competitive as possible, the following aims were listed;

Maximize - Control, output, profit, local inputs, community participation & ethical production  
Minimize - Risks, costs & investment

All decisions building the model were then balanced against these. For example, to ensure adequate numbers for an abattoir in an ordered sustainable delivery, aggregation facilities are required. Maximum control occurs if the facilities are owned and run, but a cost of extra capital invested compared to a contract facility. The final model details would be developed in a feasibility study balancing all these considerations of the business.

Brainstorming sessions were then conducted to flesh out the model and test it against the practical considerations to be encountered running such a business. Questions raised from these sessions were referred to industry experts for their advice and the results incorporated into the model. These results were also fed into the financial summary calculations.

Central to the model development is supply increase and continuity of production. While this demand driven model may be slightly more expensive than current costs, its output is sustainable and increasing where the current system sheep numbers are in decline. Given projected demand and price increases, the aim is to contain current costs but not at the expense of output. Key findings to increase the production of sheep and sustain a viable processing operation follow:

#### Farmers

Farmers are most likely to increase production if they receive higher prices and/or long term profitable contracts. Price and volume can be budgeted, thus ensuring bank, trade or other financial options could be accessed.

Family farmers are efficient compared to Corporate farmers in production of commodities. The top 25% of WA farmers returned an average of 10.1% return on capital (ROC) over 8 years compared with average farmers returning 3.7% ROC over the same period.<sup>15</sup> Corporates struggle to achieve 1% ROC after fees. With this in mind, harnessing the responsiveness & productive capacity of the family farm for lamb production is essential.



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<sup>15</sup> Planfarm Bankwest Benchmarks 2014-2015

### Processing and marketing structure

Several abattoirs in Western Australia have failed in the last decades, several of which are currently unutilized. The industry explanation given for the inability to be viable, has been given as:

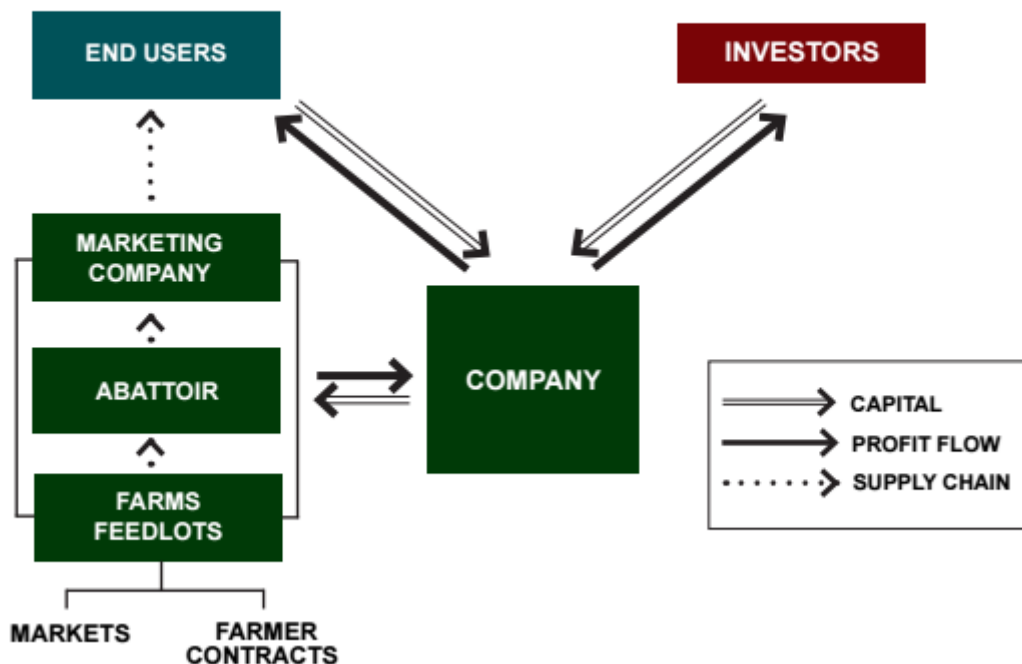
*“The Abattoirs did not last due to lack of a buyer to take product on a long term basis. They relied on marketing as they produced, without any pre-arranged offtake capability. As well they had no supply arrangements from producers to maximize abattoir profitability”* <sup>16</sup>

Risk reduction at both ends of the processing/marketing operation is highly desirable. Maximizing pre-sold output is essential as are long term profitable contracts with farmers. Additionally, if spare abattoirs capacity at was available (as in the Eastern States), those facilities could be utilized more efficiently for the industry to open up innovative, profitable new operations.

The marketing arm of the company would handle foreign exchange, export and niche marketing where opportunities could be realized. It would be a function of the marketing arm to manage the daily pricing decision and ensure that the end users supply and product requirements were satisfied.

The Model:

## VERTICALLY INTEGRATED COMPANY



<sup>16</sup> P Trefort Interview March 2016

## Model explanation

For sustainability of the company, pre-sold output reduces sales risk on a long term basis. For this company to enter into off-take contracts with end users, they must have product integrity (e.g. shelf life using Cryovac packaging) and meet quality standards. The logistics system must deliver to the customer on time ensuring maximum available retail shelf time. These functions would be controlled by the marketing division of the company. This stage on the model is from the company to the end users.

Processing is a critical component of the company. The abattoir must run at or near capacity at all times to ensure maximum productivity and profitability. The obvious solution is to use a contract kill facility if available to minimize capital invested. However, WA abattoir operators do not offer reliable 12-month contract kill facilities, instead fitting contract kills into their spare time. Contract kills are therefore unsuitable if sales are locked in and production cannot be guaranteed.

The capacity and throughput of the abattoir will be determined by the end-user's requirements. The sustainable competitive advantage would be determined e.g. ageing time, traceability, quality controls etc., whilst also identifying growth areas such as niche marketing.

As the end users determine the product requirements, that then determines the flow of sheep into the abattoir. The company then has to schedule product from its own farms, contracted farmers and markets to arrive on time each day. Sufficient backup livestock volume must be held to cover any shortfall. This stage on the model is where markets and farmer contracts feed product to the farms/feedlots.

The profits of the company must be sufficient to fund growth. This is in the best interests of the JV end user investment and will also ensure that it can attract institutional investment at advantageous rates once the company has bedded down the JV end user relationship. This stage of the model is the black profit line from the marketing, abattoir, farms/feedlots to the Company and then to the end users and investors

The relationship between the company and the end-users is of critical importance. The marketing company would handle this relationship ensuring service, solutions and client growth opportunities using the products supplied. Professional sales staff would visit end users to ensure satisfaction and maximum returns were gained at wholesale and retail level.

Due to the complexity of functions in the vertically integrated company, marketing, processing and production would be run separately but would report to the parent company. Superior communication, management systems and technology is required to make it work as are management and financial qualifications of senior professional staff.

This structure has existing industry application with Bindaree Beef Group (refer Section 5) attracting JV finance to fund expansion. Off-take agreements at both ends of the vertically integrated company, end user product specification and the design to attract institutional investors are unique functions of this model. This model is capable of being adapted by existing processors or being used in a start-up operation.



### 4.3 Livestock Leasing

Finance for livestock purchases is typically aimed at opportunities of trading. High interest rates relative to asset and machinery purchases can only be justified when a quick and profitable trading opportunity presents.

To expand the sheep industry, a cost effective source of finance for breeding livestock would be of benefit to producers wanting to rapidly increase their flock size.

An interesting model which could be used is “Cowbank”. Cowbank funds the purchase of a dairy herd where the value of the cows comprises 20% of the total capital required for the dairy operation. Cows are owned by Cowbank and leased to the farmer over 5 years with monthly payments and a 20% residual payable on completion of the lease term.

Cowbank does not fund specific animals but a herd which the farmer selects. Of that herd of 100 animals leased, the farmer must also have an additional 20 first and second milkers (i.e. 40 replacements) on hand at any time. This ensures that losses do not impact the lease payments and the farmer can breed his replacement cows.

Cowbank is now able to attract funds at more competitive interest rates than trading accounts due to it being established for over 10 years and aligning itself with milk companies wanting to increase production.

Cowbank audits its customers annually and admits that “dealing with honest people” makes life a lot easier.<sup>17</sup> A worked example is included in the addendum showing the tax benefits.

Application to the sheep industry

- Applicable to farmers with existing self-replacing flocks wishing to rapidly expand.
- Farmers select their preferred flock and identify for audit purposes.
- Lease payments would have to be aligned with income i.e. shearing and lamb sales.
- The lease term would reflect the age of the flock purchased (maximum term 5 years).
- A residual payment of 20% on completion of the lease term appears appropriate.
- An annual audit of the flock and replacement ewes would be required.



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<sup>17</sup> R Banks Cowbank interview march 2016

#### 4.4 Finance.

Agriculture has a risk profile that many institutions have been unwilling to accept. Despite the escalating global requirement for increased meat production, capital for individual operations largely remains via traditional bank and trade finance, with capital for very large-scale agricultural projects available primarily for low risk investment; established operations on premium land, known management, and a profitable track record. Investment is severely limited for new or innovative ventures, or investments of smaller value.

With a minimum investment threshold typically in the region of A\$100million, funds and foreign investors in agricultural projects in Australia are targeting the opportunities around global food security, most typically in operations such as grain. The investment perspective typically views operating profitability from agri-businesses as low, volatile and subject to a range of uncontrollable factors such as commodity prices and weather. Substantial asset revaluation over time is required to meet acceptable investment criteria.

Investors currently seeking agricultural investments in Western Australia most usually do so through third party advisors. Private investors, companies and global funds seek solid agricultural opportunities that fall within their investment parameters, however the pool of available opportunities that lie within their investment criteria is limited, and biased heavily towards cattle and grain.

The hurdles to the successful linkage of producer and financial investor are substantial, including: -

- Mismatch of investment time frame requirements.
- Lack of Investor readiness. (refer addendum for further details)
- Lack of understanding and mentality between two radically different sectors; finance and farming
- Reporting and Governance issues.
- Opposing requirements in terms of risk and control issues.
- Blockages in the supply chain.

With few premium agricultural investments of suitable scale matching the general investment market, Australian institutional funds have until recently avoided this sector.

However, the appetite of International funds has increased substantially over the last decade, with some of the largest agricultural fund managers in the world, US based groups like Hancock Farm Company and Westchester, showing strong interest in Australia. Where interest in Agricultural investments from China is mainly driven by food security issues, US investors look at agriculture as a separate income generating asset class. A current ABARES report showed investment in agriculture, forestry and fisheries was up by \$200 million to \$1.3 billion last years, with foreign ownership of Australian land growing rapidly within the last five years. <sup>18</sup>

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<sup>18</sup> <http://www.abc.net.au/news/2015-07-17/us-investment-wave-predicted-for-australia/6627508>.

Despite the estimated requirement for some \$1,000 billion of capital investment in the agricultural sector over the next 35 years to maximize the return from global demand<sup>19</sup>, Australian superannuation funds investment in this sector totals just 0.03% of total assets. Gary Weaven, head of industry super fund IMF, attributes this to agriculture historically being an underperforming asset which has not reaped the rewards from the whole supply chain. He states that 'The Chinese and Indian investors can secure higher profits because they control or influence distribution chains in their own countries. I am sure that we (the super funds) would invest a lot more superannuation dollars in all Australian industries if governments and businesses could find ways to better secure distribution arrangements'<sup>20</sup>

The rapidly escalating interest from institutional and large ultra-high net worth investors in Australian agriculture is driven by the appreciation of a potential global food shortage, a less robust stock market and continued low interest rate environment. However, the time scale for this investment to flow through to the smaller agricultural operation could be protracted, if at all, without the creation of specialized investment vehicles. The challenge for the sector is to create small to mid-level investment structures that broaden the depth and width of acceptable investment, allowing an accelerated take up of the many unfunded opportunities in Australian agriculture.

The Alexander report proposed many such structures which could be used to expand the sheep industry, yet whilst those structures are advantageous within a growth market, this study found that confidence in the broader business of the sheep industry was being eroded at the producer level by the many factors discussed in this report, with farm producers typically 'price takers', at the end of the chain.

At a time of unlimited opportunity and rising demand at the institutional levels, for the producer, the current conditions are inhibiting not only investment options, but also their willingness to embrace expansion, and in some cases, willingness to remain in sheep production at all. The continuing decline in sheep numbers in WA indicates a requirement to radically alter the model, to create structures that overcome current growth inhibitors.

The recent signing of the China Free Trade agreement, coupled with the first chilled sheep-meat shipment to China by V & V Walsh/Grand Farm in March 2016, could have tremendous implications for the industry. If producers are included and rewarded as integral participants in the long term growth benefits of this and other similar ventures, it could herald an opportunity for new investment structures to be created based on reliable contracts, strong future demand and healthy profits.

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<sup>19</sup> Agriculture Insights Greener Pastures ANZ 2012

<sup>20</sup> <http://thenewdaily.com.au/money/2016/03/31/superannuation-owning-farm>

## 4.5. Pasture Development

To ensure a pasture based livestock enterprise is as robust as possible in the face of Climate Change, we examined the comparative advantage of Perennial Pastures in depth. Comparative advantage in other areas may include organic, saltbush or native shrub pastures suited to a particular area, access to stubble areas, transport advantage etc.

### Soils

Low value sands unsuited to cropping can become productive grazing lands after perennial pastures have been sown down. Pioneered by Evergreen Farming members over 20 years ago, they have proved robust and resilient in the low-frost areas of the Central West and South Coast.

The non-wetting nature of these sands have long been recognized as limiting cropping and pasture production. They are being treated by Mouldboard ploughing, clay spreading, deep ripping and furrow sowing. Perennial pastures are sown using furrow sowing techniques and therefore do not require these treatments. Once established, Perennial pastures ensure greater water penetration and utilization due to surface coverage and soil stabilization.

### 4.5.1 Introduction

The photograph below shows the productivity of perennial grasses after one summer rain.



Production can be increased by sowing large areas to sub-tropical (C4) perennial grasses which increase quality and quantity compared to annual pastures. Being deep rooted perennials, they are drought resistant, have high water use efficiency, protect the soil from erosion and provide high quality nutrition for livestock. They are not resistant to frost.

Trial results indicate that sub-tropical grasses have a long-term role in the northern agricultural region (NAR) in areas with mild winters and/or where the rainfall >400 mm. In the NAR well adapted species can be expected to have a water use efficiency >10 kg/ha/mm, as determined from the total perennial biomass divided by annual rainfall. The best performed sub-tropical grasses across a range of sites were the panic grasses (*Panicum maximum*, cv. Gatton, green panic) and Rhodes grass (*Chloris gayana*).<sup>21</sup>

#### 4.5.2 Quality

The feed quality of sub-tropical grasses is relatively stable through the year with only small seasonal fluctuations. Within the winter growing season the feed quality of the sub-tropical grasses is lower than the annual pastures, but is still generally adequate to grow animals slowly. However, outside the growing season the sub-tropical grasses hold their feed quality and are suitable for at least maintaining weight and often suitable for moderate growth. By comparison, the quality of the annual pastures rapidly declines after senescence and is generally inadequate for animals to maintain weight.<sup>22</sup>

Refer addendum for Quality table of Perennial Grasses

#### 4.5.3 Quantity

Sub-tropical grasses can even out the seasonal feed profile by producing green feed following out-of-season rain. In addition, well adapted sub-tropical grass pastures can improve the resilience of grazing systems in years with difficult seasonal conditions (i.e. below average rainfall and/or poorly defined breaks to the season), especially in areas with mild conditions over winter.

With good summer rainfall all of the sub-tropical grasses grew well, but their overall production was limited by plant density. Overall, sub-tropical grass pastures with a high plant density can be expected to produce in the order of 20 to 30 kg/ha per mm of rainfall over the summer-early autumn period (assuming rainfall events of >20 mm over 7 days).<sup>23</sup>

Sub-tropical (C4) grasses are nitrogen dependent and farmers oversow serradella to provide cheap nitrogen. Trial results indicate superphosphate and manganese applications boost production.<sup>24</sup>

Refer addendum for Quantity table of Perennial Grasses

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<sup>21</sup> G Moore et al DAFWA Quality and quantity trials of perennial grasses in WA 2009

<sup>22</sup> G Moore et al DAFWA Quality and quantity trials of perennial grasses in WA 2009

<sup>23</sup> G Moore et al DAFWA Quality and quantity trials of perennial grasses in WA 2009

<sup>24</sup> C Valentine DAFWA Perennial fertilizer trials Badgingarra 2012-2013 "Transforming the northern sandplain" project

#### 4.5.4 Grazing management – pasture interaction

MIDAS modelling is used by DAFWA in Western Australia to give whole farm enterprise optimization evaluations. This facility is available but currently has not been calibrated for the Northern Agricultural Region. MIDAS modelling and long-term perennial grazing management studies would enable accurate animal production calculations for the region.

Rotational grazing is essential for perennial grasses. Regeneration times range from 30-120 days between grazing and are largely determined by soil moisture availability, soil fertility, sunshine hours and air temperature.

#### 4.5.5 Productivity Improvement

Given the variability of rainfall, establishment density, soil fertility, grazing management and the lack of modelling as described above, it is difficult to accurately quantify the productivity improvement, however anecdotal evidence from farmers' ranges from 200-600% productivity increases with 300% appearing to be the average for well-established pastures sown.<sup>25</sup>

Cost of seeding perennial pastures vary between \$100-\$200/ha depending on seeding rate, fertilizer use, use of contractors, weed burden etc.<sup>26</sup>. This cost can be spread over the life of the pasture, currently greater than 15 years.

An establishment rate of 8-10 plants/m<sup>2</sup> is considered successful.<sup>27</sup> Rabbit and kangaroo activity can destroy emerging pastures and limit established pasture production

The following photographs show the establishment phase (left) and the fully developed perennial C4 grass pasture (right).



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<sup>25</sup> Case studies -various Evergreen Farming refer website

<sup>26</sup> Evergreen Farming FAQ website

<sup>27</sup> G Moore et al DAFWA Quality and quantity trials of perennial grasses in WA 2009

## 5 Discussion - Findings

### 5.1 Joint Venture Financing – Equity capital to fund expansion & opportunities

Australian agricultural businesses are establishing joint ventures with end users injecting capital to expand operations. The most relevant example is Bindaree Beef Group, however discussion on Australian Fresh Milk Holdings has been included as an example of product innovation attracting JV funding. Sundrop Farms have attracted \$180m from investors to fund sustainable truss tomato production for a 10 year contract with Coles.

#### Bindaree Beef / Shandong Delisi Food Company

Shandong Delisi Food Company was the successful bidder in a worldwide quest by Bindaree to find investors to support an ambitious growth program. Delisi, services 700 million people with an address book of 20,000 business customers back in China.

Bindaree Beef's capital raising program has settled on the Chinese partner prepared to inject \$140 million into the local integrated beef business for a 45% equity.

“The JBS's, Cargills and Nippons of the world have significant backing. Our view was that in order to have a secure business capable of growing, we needed to have an integrated beef business, one that was well capitalised to allow the growth we're aiming to achieve.” Bindaree's chief financial officer James Rogers said.

The capitalisation offered by Delisi is “one of the last pieces of the puzzle” - although Mr Rogers indicated that completing the integration puzzle is just the beginning of Bindaree's growth ambitions.<sup>28</sup>

In July 2015, Bindaree Beef merged with meat marketing and distribution company Sanger, and then purchased the Myola feedlot at North Star for \$25 million. Myola is the largest custom-feedlot in NSW, with a capacity of 20,000 head and turnover capacity of around 80,000 head per year.

“Bindaree Beef Group (BBG) is driving efficiencies in our business to ensure we are meeting the needs of our suppliers as well as our customers. Effectively we need to ensure we are managing a quality-centered supply chain from paddock to plate and Myola helps delivers this,” chairman John 'JR' McDonald said in the statement.<sup>29</sup>

“BBG is determined to capitalize on this opportunity by earning our stripes as Asia and the world's butcher - by providing meat products sourced from quality-centered operations and delivered efficiently to the world's markets.” said John McDonald.



<sup>28</sup> The Land 28 October 2015

<sup>29</sup> The Land July 20, 2015

### Australian Fresh Milk Holdings (AFMH) / New Hope Dairy Group / Freedom Foods

AFMH is a consortium of the Leppington Pastoral Company, Moxey Farms, Freedom Foods and the New Hope Dairy Group of China. Freedom Foods has paid \$7m for a 10% equity in AFMH.

Both Freedom Foods and New Hope Dairy will have priority access to any increases in milk production at Moxey Farm or greenfield sites acquired by the venture. AFMH is expected to inject around \$80m into Moxey and other greenfield dairy sites to fund expansion.

Moxey is a major supplier of milk to a2. a2 Milk products come from dairy cows that produce only the A2 type of beta-casein protein, whereas most dairy contains both A2 and A1. Sales of the company's A1-free fresh milk, milk powder, ice cream and other dairy goods drove an 80-fold increase in first-half profit and enabled a2 Milk to fund a foray into China's booming \$US19.9 billion market for infant formula.<sup>30</sup>



### Sundrop Farms / Saumweber family / Kohlberg Kravis Roberts

Sundrop is a joint-venture company, majority owned by its founders, Germany's Saumweber family, which injected more than \$US100m (\$135m) into Sundrop in 2014 to form a near-equal partnership with private equity giant Kohlberg Kravis Roberts.

The just-completed \$180 million foreign-owned Sundrop Farms complex will produce over 15,000 tonnes of vegetables per year. Coles signed its first 10-year fresh produce supply agreement in 2014 contracting to buy every truss tomato grown in the 20 hectares of solar powered hydroponic glasshouses in the South Australian desert near Port Augusta.

Coles chief executive John Durkan said the company was also considering financially helping farmers invest in bigger scale operations. "While we are retailers, a direct co-investment is not out of the question if that is needed."<sup>31</sup> (refer addendum for more details).



<sup>30</sup> Sydney morning herald 29 February 2016

<sup>31</sup> Weekend Australian 12 June 2016



## 5.2 Vertically integrated company structure

The current industry structure is based on each link of the supply chain working on a commodity basis with volume determining company profitability. Every time the product changes hands, someone “clips the ticket” adding cost that the either the consumer or farmer pays.

By integrating the supply chain, many of these expenses can be eliminated allowing cost savings to trickle down the supply chain. Therefore, increased prices can be paid to farmers, thus underwriting increased production.

As previously mentioned in Section 5.1, Bindaree Beef Group has used Joint Venture finance to vertically integrate its business operations. The capital injected has facilitated the merger with the marketing company Sanger and the purchase of the Myola feedlot. They have effectively locked in their sales output and their processing requirements, reducing risk at both ends of their business.

Australian Consolidated Milk (ACM) is another example of a company that has thought out its market positioning and objectives with great clarity.

“ACM’s strategy is to identify high value niche market opportunities direct to our strategic customers. By targeting supply chain efficiencies and keeping our overheads low we are well positioned to support our existing suppliers and attract new ones.

ACM believes that commodity market volatility damages the confidence of dairy farmers and dairy customers. Our aim is to operate in the value added markets and not as a commodity player. We believe this high value direct to market model will bring added stability to pricing and improve confidence.”<sup>32</sup>

The key points from these companies include;

- High quality effective marketing is central to their business model
- High Value niche market positioning
- Value adding focus– not commodity producers
- Vertically integrated – direct sales to end user customers
- Target supply chain efficiencies
- Low overheads focus
- A belief that commodity market volatility damages producer & consumer confidence



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<sup>32</sup> Australian Consolidated Milk website

If customer demands are consistently met, price becomes significantly less important, thus boosting profits allowing profit trickle down to producers. As Dr Ken Henry says “The Asian agricultural and food production sectors produce mass product at low cost. That is not our future. Our future is in high quality product”<sup>33</sup>

Existing processors are well placed to examine these business options. Having established farmer suppliers and meat wholesale customers, they are in a position where they can look beyond a short term transactional relationship to one that encompasses growth and mutual benefit. They do not have the expenses and establishment costs of new entrants and are therefore ideally placed to embrace change that can reverse the WA sheep industry decline.

With little data available from the industry, an exercise was undertaken to determine the costs involved in the current supply chain which could pinpoint where savings could be made. For ease of calculation, a start-up company was used. (refer addendum). Based on a small abattoir model, it put carcass lamb into the Middle East airfreight at US\$6.00/kg, compared to April 2016 prices of US\$5.35-5.75/kg.

The margins to target are those between the abattoir/ meat marketing company and the consumer. Traditional industry mark-ups are 15-20% for the importer and 15-25% for the supermarket/ retailer.<sup>34</sup>.

## Summary

The vertically integrated company structure is being used by progressive companies to reduce risk at both ends of their business and maximize returns. Existing processors are well placed to embrace change having a competitive advantage to any new industry entrants.

Modelling is required to assess the financial viability of the integrated business model on a high level basis.

The financial model will reflect the broad capital investment capital requirements, operating costs and other support costs such as corporate and marketing expenses. Profiling the expected timing of cash flow investment and returns to both producers and investors, will not only demonstrate if these potential returns are higher than that returned under the existing industry structure, but will also inform if the potential returns are attractive enough to attract the required funding, both from the end-users’ perspective as well as from the external investors’ perspective.

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<sup>33</sup> A fresh look at Australia in the Asian Century Dr Ken Henry NAB Corporate Finance Insights February 2014

<sup>34</sup> J Carson Hassad Interview April 2016

Overview

The following general examples have been included to give an indication of the impact on the Western Australian sheep industry. The promotion of perennial pastures and sheep leasing by the company may have significant flow-on effects for the industry

**5.3 Sheep Leasing**

Sheep leasing would free up capital to establish perennial pastures, lease additional land, utilize stubbles, and other activities identified in the Alexander report, where the farmer seeks to increase lamb turnoff. The benefits of leasing would have appeal to farmers with a high marginal tax rate.

Education and promotion of sheep leasing within the agricultural community would significantly improve uptake. Uptake would not be expected to mirror “Cowbank” due to a different repayment stream and the time required by the industry to adopt it. However, it would be a valuable tool to those wishing to expand production and conserve capital.

<b>Sheep Leasing</b>			#
Lamb producers (WA sheep & Wool DAFWA)			5,600
Lamb producers >500 sheep (%)	80%		4,480
Early adopters (1-5yrs)	20%		896
Later adopters	15%		672
Average Flock size purchased (est.)			1,000
			\$
Average Flock value (\$/hd)	120.00		120,000
Value of flock 1-5yrs	120,000		107,520,000
Value of Flock 5-10yrs	120,000		80,640,000
Total value of flock leasing 10 yr period			<u>188,160,000</u>
Interest cost saving	5%		9,408,000

The above shows a case for funding over 1.5m ewes. With bankable contracts in place removing the variable price risk, a case could be made for support to the lamb industry. Real cost savings as above and additional taxation benefits may be passed back to farmers funding their expansion and productive capacity.

The example given only accounts for a total uptake of 35% of farmers over a 10-year period. This has been a conservative estimate for the purpose of estimating the volume of capital required. With promotion and education coupled with long term contracts for lamb, the volume of capital could be expected to grow significantly.

## 5.4 Perennial Pasture establishment – WA overview

Central to the project is improving the productive capacity of poorer land generally unsuited to cropping. In the following general example, sowing down 500,000 ha in the Central West and South Coast to perennial pastures has the capacity to generate an additional \$92m of farm income over 5 years and a \$258m benefit over 10 years.

Given that perennial pastures are still highly productive 25 years post-seeding in the Central West and South Coast, they offer a reliable cost effective pasture improvement to the farming enterprise and long term benefit to Western Australia.

If established correctly, they do not require renovating and can effectively reseed themselves if locked up. Therefore, poorer quality land can be put to better use with a one off cost (\$150-200/ha) that has a very long term payoff period (>20years). With a 300% productivity gain, this is a cost effective investment and environmental solution.

Detailed whole farm modelling (MIDAS as used by DAFWA) is required to confirm whole farm profitability as is detailed farm cash flow modelling to integrate such pasture establishment and animal operational costs into a farm budget. The projected net benefits appear to provide sufficient incentive for detailed analysis of this pasture system.

The photograph below shows a farmer in a newly established perennial pasture.



<b>Perennial Pasture Productivity improvement ( General example)</b>		
		Ha
Central West >400mm no frost zone (approx)		1,200,000
South Coast >400mm no frost zone		300,000
		<u>1,500,000</u>
less crop area	33%	-500,000
less cattle area	33%	<u>-500,000</u>
Area available for sheep		500,000
<b>Productivity improvement</b>		DSE
Increased carrying capacity (DSE/ha)	4.00	2,000,000
Ewe number increase		Head
DSE rating/ewe	2.85	701,754
Lamb increase/annum		
lambing %	90.00	631,579
Sheep meat potential		KG
Lamb kg/hd carcass	22.00	13,894,737
<b>Gross value of additional production</b>		\$
\$/kg processed ex farm	5.40	75,031,579
variable cost (estimate)	3.00	-41,684,211
Cost of establishment		
Seeding, fencing water etc. \$/ha	150.00	75,000,000
<b>Projected benefits (years)</b>	<b>5</b>	<b>10</b>
Additional Income (*)	166,736,842	333,473,684
Establishment costs	<u>75,000,000</u>	<u>75,000,000</u>
Net benefit	91,736,842	258,473,684
(*)Note - excluding ROC on land		



## 6 Conclusions

### Institutional investors

Austrade and the financial industry report that there is a lot of interest in agricultural investments, with overseas mining companies potentially being new players.

Institutional investors are traditionally focussed on investments that are within proven, specific investment criteria. Broadening the discussion to encompass new business models outside those parameters will require considerable effort, political and industry influence to establish a meaningful dialogue and subsequent action for the benefit of the industry.

### End user investors

There are a number of potential end user investors actively looking for opportunities in the sheep meat industry. Industry and Government support has greatly assisted enquiries for this report and further support would greatly assist any group wanting to start such a project.

### Joint venture financing

Joint venture financing is currently funding expansion and growth and is proving to be beneficial to companies poised to benefit from the surge in demand from areas like South East Asia where population or living standards are increasing.

### Vertically integrated company

The vertically integrated company structure is being used by progressive companies to reduce risk at both ends of their business and maximize returns. Vertical integration coupled with effective marketing can move a company from being a commodity producer to a high value niche marketer with the resultant profits restoring confidence of producers and consumers. Existing processors are well placed to embrace change having a competitive advantage to new industry entrants.



## 7 Recommendations

### Financial modelling

It is recommended that a financial model be prepared to assess the financial viability of the integrated business model on a high level basis, which can be expanded to include more granularity to support a full feasibility study in the future.

This financial model will reflect the broad capital investment required to purchase land, prepare the land for cropping and grazing, purchase the sheep flock, construct new (or upgrade old) abattoirs, as well as repair and maintenance, operating and other support costs such as corporate and marketing expenses. The financial model will also include the sheep production cycle, which is an important aspect for working capital requirements. Profiling the expected timing of cash flow investment and returns to both producers and investors, will not only demonstrate if these potential returns are higher than that returned under the existing industry structure, but will also inform if the potential returns are attractive enough to attract the required funding, both from the end-users' perspective as well as from the external investors' perspective.

### Future investment register

A detailed and specific investment register is recommended for the West Australian sheep industry, with opportunity for a more complete flow of information between the investor and investee, including clear information and assistance available from government agencies. This could also include a greater visibility for start-ups and innovative ideas and products in the industry. (refer attached example in addendum)

### Financial education recommendations

The disconnect between producers and financier's knowledge requires opportunities for each to learn when required. Once trained, farm advisers and grower groups are ideally placed to provide this knowledge bridge although assistance should be available to those farmers not currently using such a service. In addition, many industry innovations, research and training opportunities are missed by farmers due to cost, but could be utilized if linked to re-training programs.

### The role of Industry and Government

The role of Industry and Government needs to be discussed and agreement reached that both would support such innovation in the sheep meat industry. Support of the integrated company concept would greatly assist opening doors to the top decision makers for Corporations, State Owned Enterprises (SOE's) and institutional investors.

### Perennial pasture modelling

The advantages of perennial pastures are well documented but have not been quantified in a whole farm system for the Central West and South Coast of Western Australia. It is recommended that whole farm optimization modelling (MIDAS) be undertaken as it has the capacity to deliver a greater degree of accuracy and consistency to short and long term decisions of the industry.

## 8 Key Messages (for producers & processors)

### Sustainability

Growers should be calculating cost of production and maximizing comparative advantage to ensure profitability. Growers should ensure they have the long term sustainability required for their business to survive and grow by demanding contracts and marketing to advantage.

### Processing

The lack of price incentive for farmers to hold lambs and feed out of season will accelerate the move to the airfreight light lamb trade.

### Processing - Contract killing

A reluctance to offer contract killing facilities in Western Australia is holding back the industry. If abattoir operators could embrace this practice, it would increase utilization of their facilities and provide long term flow on benefits. If competitors establish processing facilities, it may well erode their traditional supply base. With a currency exchange rate of AU\$1.00=US\$0.76, Australian assets are good value for money for foreign investors.

### Model application

The integrated structure could be modified by existing processors to fund expansion and growth. It may also be used by existing players to fund productive asset acquisition on an individual or collective basis. A collaborative approach will ensure planned growth for the industry.

### Marketing

With an accepted 40-50% mark-up between processor and the retail customer, there appears marketing opportunities for existing processors to not only increase their profitability, but to return some of that to the industry upon which their future is based. Q Lamb and now Dorper lamb company proved it can be done with Q Lamb passing real benefits back to the industry.





## 9 Addendum

### Interviews

Interviews were carried out with representatives of each sector of the sheep industry. They included: -

#### End User

Bahrain Livestock Company- B Brice, Hassad - J Carson, LucaZara - D O'Brien,

#### Producers

A cross section of farmers from various districts including Wongan Hills, Dandaragan, Badgingarra, and Katanning were contacted for their feedback.

#### Government & Industry

DAFWA - B Mullan, P Frapple, T Burnage, B Plunkett, T Alexander

IWAA. - V Jacobs

MLA – D Beatty, M Finucane, A Simpson,

Austrade - K Stirling, F VanRuth

#### SILC.

R Edgerton Warburton

#### Agent

Elders -T Marron, D Hubbard.

#### Production facilities

Fletchers - G Cross, V&V Walsh - P Cody, P Trefort – ex Hillside

#### Finance & investment

BDO, - B Aitkin, E Tan and P Toll, PWC - C Edwards

Aux Ventures - J Wainright, 3F Asset Management -C Anderson

Agrify- D Champion,

## Vertically integrated company example

<b>Cost of Production - Breed - 60% (120,000hd/annum)</b>					
<b>Financial Summary</b>			<b>\$M</b>	<b>Cost of Production</b>	
				0% ROC	3% ROC
<b>Income</b>					
	Wool		5.10	\$5.71/kg	\$6.98/kg
	Livestock trading		-1.85		
	Lamb		13.20	\$4.24/kg	\$5.19/kg
	<b>Total</b>		<b>16.45</b>		
<b>Expenses</b>					
Direct	Contract Cropping		3.00		
	Nett value of feed fed		1.80		
	Shearing & Crutching		1.76		
	various		2.24		
Labour	Salary & wages		1.60		
Overheads	Pasture		1.20		
	Administration		0.50		
	Motor vehicle		0.60		
	Utilities & repairs		0.70		
	<b>Total</b>		<b>13.40</b>		
<b>Capital</b>					
\$100M	ROC 3%		3.00		
Capital - Farms & abattoir \$80m Livestock \$13m Pastures+ infrastructure \$7m					
Note - Wool price c/kg greasy, Lamb c/kg carcass weight.					
<b>Company Production (Total)</b>					
	#	kg/hd	total kg	\$/kg	\$
	120,000	22	2,640,000	5.19	13,701,600
<b>Buy - 40% (of 200,000 total) 80,000hd</b>					
Farmer Contracts					
	40,000	22	880,000	5.50	4,840,000
Market purchases					
	40,000	22	880,000	4.80	4,224,000
<b>Total</b>			4,400,000		22,765,600
<b>Average cost/kg (\$)</b>					
					5.17
<b>Levies</b>					
			2.00%		5.28
<b>Processing (carcass only)</b>					
					\$
	Variable cost/kg				0.80
	Overheads				0.20
	ROC (7%) \$10m abattoir		700,000		0.16
<b>Total</b>					1.16
<b>Total ex abattoir (AU\$/kg)</b>					
					6.44
<b>Total ex abattoir (US\$ /kg)</b>					
			0.76		4.89
			SE Asia \$US/kg		M East \$US/kg
	Airfreight 4500kg	0.65			1.15
	Sea freight 20' reefer		0.22		0.26
<b>Landed cost</b>		5.54	5.11		6.04
					5.15
<b>2015 Wholesale US\$</b>					
	(MLA snapshot)		4.40-4.80	5.30-5.75	4.70-5.00
<b>Current retail US\$</b>					
	Frenched rack		35.50	cutlets	20.50
	( online prices)		(Dorper Lamb Co)	(trolley.ae)	

**Cowbank Herd leasing example**

Finance Cost Comparison							
	Total 5 Years	Year	1	2	3	4	5
Value of Herd to be Financed	\$ 200,000						
AFI (residual) value at end	\$ 40,000						
Average Tax Rate (5 yrs)	30.0%						
<b>Mortgage Comparison Rate</b>	<b>9.00%</b>						
<b>Mortgage Finance</b>							
Principal Pmt	-\$200,000		-\$26,533	-\$29,022	-\$31,744	-\$34,722	-\$77,979
Interest Pmt	-\$57,280		-\$16,923	-\$14,434	-\$11,712	-\$8,734	-\$5,477
Total Pmt	-\$257,280		-\$43,456	-\$43,456	-\$43,456	-\$43,456	-\$83,456
Tax Refund (on interest paid)	\$17,184		\$5,077	\$4,330	\$3,514	\$2,620	\$1,643
<b>Total Pmt After Tax</b>	<b>-\$240,096</b>		<b>-\$38,379</b>	<b>-\$39,126</b>	<b>-\$39,942</b>	<b>-\$40,836</b>	<b>-\$81,813</b>
<b>Mortgage After Tax Finance Cost</b>							
<b>Mortgage After Tax Int%</b>	<b>6.30%</b>						
<b>CowBank Herd Lease</b>							
Lease Pmt	-\$304,000		-\$52,800	-\$52,800	-\$52,800	-\$52,800	-\$92,800
Service Pmt	-\$7,500		-\$1,500	-\$1,500	-\$1,500	-\$1,500	-\$1,500
Total Pmt	-\$311,500		-\$54,300	-\$54,300	-\$54,300	-\$54,300	-\$94,300
Tax Refund (on all lease payments)	\$81,450		\$16,290	\$16,290	\$16,290	\$16,290	\$16,290
<b>Total Pmt After Tax</b>	<b>-\$230,050</b>		<b>-\$38,010</b>	<b>-\$38,010</b>	<b>-\$38,010</b>	<b>-\$38,010</b>	<b>-\$78,010</b>
<b>Herd Lease After Tax Finance Cost</b>							
<b>CB Herd Lease After Tax Int%</b>	<b>4.95%</b>						

(Consult your accountant for independent financial advice on your individual situation.)

**Perennial Pasture Quality Table** <sup>35</sup>

Pasture Type	Season	CP (%)	DMD (%)	Est. ME (MJ/kg DM)
Temperate perennial grasses	Start or end of growing season	19.8±7.8	72.0±9.9	10.8±1.7
	Growing season	20.7±5.6	77.8±7.7	12.0±0.9
	Outside growing season	15.0±6.1	68.3±7.5	10.1±1.3
Sub-tropical perennial grasses	Start or end of growing season	15.6±5.5	65.2±5.6	9.6±1.0
	Growing season	14.9±4.1	66.3±5.0	9.9±0.9
	Outside growing season	12.0±4.3	63.4±5.2	9.3±0.9
Annual volunteer pastures	Growing season	18.7±6.9	77.6±6.5	11.9±1.0
	Outside growing season	8.4±1.9	47.1±10.9	6.5±1.9
Annual legumes	Growing season	23.5±3.9	77.5±5.1	11.7±0.9
	Outside growing season	9.3±2.3	44.4±14.1	6.7±2.9
Annual grasses	Growing season	13.3±5.0	78.5±8.3	11.9±1.4
	Outside growing season	5.2±4.2	51.8±8.6	7.7±1.6

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<sup>35</sup> G Moore et al DAFWA Quality and quantity trials of perennial grasses in WA 2009

**Perennial Pasture Quantity Table** <sup>36</sup>

Variety	Harvest date and biomass of sown species (kg/ha)					
	16/02/06	8/06/06	6/09/06	12/10/06	13/12/06	Total
Annual volunteer	0	241	664	1354	0	2260
Katambora Rhodes	1303	887	2008	2050	1112	7360
Gatton panic	2153	589	1618	1214	141	5715
Callide Rhodes	772	976	1371	1406	707	5180
Green panic	2214	787	2154	1470	394	7020
Narok setaria	2156	1243	634	1084	683	5800
Premier digit	2131	426	524	1006	847	4930
Splenda setaria	1424	1106	431	1038	527	4525
Bambatsi	2406	536	684	912	438	4975
Kikuyu	199	326	341	427	60	1350
Signal grass	1649	897	749	940	443	4680

<sup>36</sup> G Moore et al DAFWA Quality and quantity trials of perennial grasses in WA 2009

## Investment readiness.

Capital for the purpose of business expansion requires the principals to prepare a credible case for why investment will stimulate enough return to meet the requirements of both current owners and investors.

For investment attraction, it must meet certain criteria: -

- It must be viable, including return on investment.
- It must be a sustainable business model
- There must be good management
- It must have a competitive advantage.
- The vision must match reality, backed by credible evidence.

An agricultural investment follows the same rules as any financial investment, and must be presented as such. A minimum requirement will be pristine financial records, an information memorandum, realistic expectations about value for equity, a clear case for future growth, and detailed knowledge of the market. In addition, the principle should have a good understanding of the investment process, and the requirements of governance. Market research is vital.

The process of preparing an organization for potential investment is highly valuable in itself. Where the principal and management team is retained as an on-going part of the company, it is critical that the team engages in this process, either with or without professional advisors. The value of a business plan or information memorandum is not only to gain investment, but in the process of thinking and learning that the management team must undertake to satisfy investor requirements. There are a number of websites that can be accessed to gain a greater understanding of the requirements of investors.

For example, Australian company Aux Ventures is an agricultural investment advisor, which is developing a rural finance health check for agricultural companies to cross reference their business opportunity. Another simple example is UK site [The business survival toolkit](http://www.business-survival-toolkit.co.uk/)<sup>37</sup>, that offers a straight forward checklist of questions relevant to any industry or scale of operation. Preparation of a company for investment by a third party is time consuming, detailed and expensive, however it is critical for the management to understand the process and produce the information in the format required by the investor. Failure to produce such information will render the investment unlikely.

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<sup>37</sup> [business-survival-toolkit.co.uk/](http://www.business-survival-toolkit.co.uk/)

## Investor Register - example

<http://globalinvestorcoalition.org/>

Low Carbon Investments - an example								
Investor								
Investor	Type	Value (USD)	Destination	Managed	Current or commitment	Fund	Listed	
Australian Ethical Superannuation	Broadband	>10M-50M	Australia/New Zealand	Externally	Current	Australian Ethical Larger Companies Trust and Australian Ethical Smaller Companies Trust	Listed	<a href="#">Details</a>
			Australia	Australian Ethical Investment Pty Ltd				
				Australian Ethical Larger Companies Trust and Australian Ethical Smaller Companies Trust				
Australian Ethical Superannuation	Circular economy activities	<10M	Australia/New Zealand	Externally	Current	Australian Ethical Larger Companies Trust and Australian Ethical Smaller Companies Trust	Listed	<a href="#">Details</a>
			Australia	Australian Ethical Investment Pty Ltd				
				Australian Ethical Larger Companies Trust and Australian Ethical Smaller Companies Trust				
Australian Ethical Superannuation	Hydropower	>10M-50M	Australia/New Zealand	Externally	Current	Australian Ethical Larger Companies Trust and Australian Ethical Smaller Companies Trust	Listed	<a href="#">Details</a>
			Australia	Australian Ethical Investment Pty Ltd				
				Australian Ethical Larger Companies Trust and Australian Ethical Smaller Companies Trust				

Agricultural Investment - an example								
Investee								
Investment type	Type	Value (USD)	Destination	Managed	Current or commitment	Preferred investee	Listed	Details
Joint Venture	Cattle	\$20 million	Western Australia	Owner/operator	Current	Industry Investment	no	<a href="#">5,000H/10,000Cattle, food infrastructure</a>
Sale	grain	\$25m	Esperence	Owner/operator	current	n/a	no	<a href="#">10,000H</a>
Partnership	sheep	\$5million	Wheatbelt	Owner/operator	current	Industry Investment	no	<a href="#">7,500H, opportunity to purchase neighboring property (5,000H</a>
Sale	sheep/wheat	15m	Australia/New Zealand	Externally	Current	Investment Fund	Listed	<a href="#">8,000H, 5,000 sheep, suitable for cattle</a>

## Recent JV examples in Australia

Coles a good employer, Weekend Australian 12 June 2016

Coles chief executive John Durkan was in outback Port Augusta, South Australia, yesterday to see the first tomatoes dispatched to Coles supermarkets from the futuristic new Sundrop solar-powered glasshouse farm. He said the farm proved how beneficial long-term supply contracts were for both farmers and his supermarkets.

The just-completed \$180 million foreign-owned Sundrop complex was built in the past 18 months, after Coles signed its first 10-year fresh produce supply agreement in 2014. Coles has contracted to buy every truss tomato grown year round in the 20 hectares of hydroponic glasshouses in the desert.

Sundrop is a joint-venture company, majority owned by its founders, Germany's Saumweber family, which injected more than \$US100m (\$135m) into Sundrop in 2014 to form a near-equal partnership with private equity giant Kohlberg Kravis Roberts. It helped fund construction of the SA flagship facility and recently began trials to build similar solar-powered glasshouses in Portugal and the US.

Mr Durkan said the company planned to sign more 10-year contracts with farmers, with the Sundrop tomato deal and Murray Goulburn's contentious agreement to supply Coles with \$1 a litre home brand discount milk the trendsetters. He said the Sundrop tomato venture showed how partnerships could help develop rural regions and provide much needed jobs.

"You would never think of Port Augusta as a place to grow tomatoes, but Sundrop has shown that by investing together with us in a long-term contract this type of sustainable and innovative farming project can get built and become a great example of the way forward for other farmers.

"Coles is really interested in farmers. We want to work directly with growers in these supply agreements and pay a good farmgate price — because with no middlemen it all goes back to the farmers." Mr Durkan said for this reason Coles favoured supply deals with grower co-operatives and farmer-owned businesses.

He was also adamant that Murray Goulburn's deal to supply \$1 a litre home brand milk to Coles for 10 years had not caused the savage April milk price cuts to farmers. Instead, he blamed low global dairy commodity prices, pointing out Dairy Australia last week found the decision by Coles and Woolworths to discount milk prices in 2011 had encouraged more milk to be sold. Dairy Australia concluded the industry was \$235m better off because of this resulting growth in milk sales.

Mr Durkan confirmed Coles was now working with Sundrop to build a second solar-powered facility to supply other fruit and vegetables throughout the year, possibly including strawberries and other berries.

He said the company was also considering financially helping farmers invest in bigger scale operations.



“We will look for what fresh fruit and vegetables we are short of in some seasons and that will dictate the location,” Mr Durkan said.

“While we are retailers, a direct co-investment is not out of the question if that is needed.”

#### Australian Consolidated Milk (ACM)

ACM’s strategy is to identify high value niche market opportunities direct to our strategic customers. By targeting supply chain efficiencies and keeping our overheads low we are well positioned to support our existing suppliers and attract new ones.

ACM believes that commodity market volatility damages the confidence of dairy farmers and dairy customers. Our aim is to operate in the value added markets and not as a commodity player. We believe this high value direct to market model will bring added stability to pricing and improve confidence.

The Asian Growth story is real and we are now uniquely positioned to participate having invested in our new joint venture UHT plant known as Pactum Dairy Group

#### **Review participants**

The authors wish to thank the following people for their assistance in reviewing the report. They include;

B Aitken, E Tan – BDO

P Trefort

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