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Potential for Rangeland Grassfed Assurance Programs in Western Australia

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Abstract

The access to large aquifers in the Pilbara region, the investment in mosaic irrigation, the global consumer demand for certified grassfed product and the need to back any branded product with an auditable assurance program were all key factors contributing to the undertaking of this project.
The project conducted a desktop review of existing global grassfed certification programs, undertook modelling to determine the projected viability for grassfed beef, engaged with producers, butchers and processors in Western Australia to determine the potential for developing a Grassfed Assurance Program for Western Australia.
All sectors of the supply chain expressed support for the future development of a Western Australian Rangeland Grassfed/Pasturefed Cattle Assurance Program. Future development should be expanded to include the Agricultural cattle producing areas of Western Australia to create enough scale to meet market demand. Developing this program will give the Western Australian cattle producers a point of difference and the ability to supply the increasing global demand for grassfed beef, changing its focus from being just another feedlot grain fed market trading a commodity product.

Executive Summary

This project was undertaken to determine the potential for developing a Rangeland Grassfed Assurance program in the Rangeland Regions of Western Australia. The continued growth of grassfed certified product in the US and domestic markets, the Rangelands unique ability to naturally produce livestock without the use of Hormone Growth Promotants (HGP) and antibiotics and the recent investment in mosaic irrigation in the Pilbara were all key factors in undertaking the project.

- A review of the supply chain was undertaken to determine the regions ability to deliver livestock into a certification program under-pinned by Meat Standards Australia (MSA). The project reviewed existing grassfed/pasturefed certification programs from Australia, USA and the UK and the ability of the Rangelands to produce livestock that complied with these programs.
  Modelling was undertaken to investigate the profitability of finishing cattle on pivots and or on farming land in the south west. The impact of distance on the MSA score for cattle coming from the Pilbara was also reviewed. The certification program developed by Cattle Council – Pasturefed Cattle Assurance System was found to be the best fit for purpose program for the region. Previous supply of cattle into the MSA program from the Pilbara region has been limited in number and timing. However, when cattle have been delivered, they have performed well. Constant access to high quality grass will be critical in successfully delivering cattle into the MSA program. This can be done through the use of pivots and utilisation of southern agricultural properties.

- On-property discussions throughout the Pilbara region were undertaken to determine the level of producer's interest in the development of a grassfed MSA program.
  A number of Pilbara producers own or have access to, farming land used for backgrounding cattle. Traditional background has been done for the live export market or prior to entry into southern feedlots. The transition of these farms to become certified and form part of the supply chain can be undertaken with ease.

- Further desktop research on the international markets for grassfed beef and the growth of these markets was undertaken. The US market for grassfed beef has grown from, <US$5m in 1998 to >US$2.5B in 2015. Australia's trade of grassfed beef with the US has grown similarly reaching 70,000MT in 2015. Market indicators from established grassfed supply chains on the eastern seaboard shows live weight premiums in the range of AU$0.50 to AU$0.70.
  Understanding of certified grassfed beef domestically in Western Australia is limited. The main supermarkets are running variations of grassfed product with one utilising the PCAS brand. This product is from the eastern states and supply is limited. The local Perth butcher shop market has a limited understanding of certified grassfed product and is sometimes confused due to the seasonal supply of grassfed product in the period known as the spring flush. This product has no certification program supporting its authenticity.

- Western Australian processors were engaged to determine the level of interest in supporting the further development of a MSA Grassfed certified product. The general response was very strong in favour of further development of the supply chain. In the competitive market processors are looking for an alternate to the tradition grain fed product and firmly believe that the MSA grassfed program delivers an advantage to the industry.

As the project progressed it became apparent that the development of a grassfed certified brand shouldn't be restricted to the Rangelands of the Pilbara. The investment in mosaic irrigation precincts in the Pilbara added to Western Australia's ability to deliver a consistent grassfed product 12 months of the year. By shifting the traditional supply chain model of harvesting cattle at certain supply period to a model linking the supply regions together to supply a consistent product, consistently creates a robust supply chain that adds value to all participants in the supply chain. Shifting the focus from the traditional grain fed industry to grassfed creates a point of difference for Western Australian beef producers, creating a significant positive impact on the future of the beef industry in Western Australia.

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1 Background

The key requirements of a certified grassfed beef program are: No HGP's, No Antibiotics, and No Grain; and for the domestic market; MSA eligibility. The rangeland production system complies with these requirements on all accounts by default. The investment in mosaic irrigation in the Pilbara and the ability for further utilisation of agricultural backgrounding properties creates further opportunities to develop a grassfed program. Herd numbers have continued to decrease in the southern half of Western Australia due in the main to the lack of the long term average profitability being generated from the traditional supply chain. Previous market uncertainty in the live export trade has shown how the profitability of the beef industry in Western Australian and more specifically the Rangelands can be impacted by the lack of market options. Changing Global consumer preferences for grassfed beef only further add to the need to explore the development of this program. The higher cost structure of the Western Australian processing sector compared to the costs on the East Coast further enhances the need for the Western Australian beef industry to have a point of difference.

1.1 Market Demand

Global demand for grassfed beef has increased year on year throughout North America and domestically in Australia. Growth of the US market has seen the market grow from a turnover in 1998 of <US$5m to a market of >US$ 2.5b in 2015* USDA. Australia's export market to the US has increased year on year to reach 70,000 swt in 2015. The potential growth of the Asian market for grassfed beef is yet to be developed. The demand for safe clean food through the Asian region should result in unprecedented demand for certified grassfed beef. This market for grassfed beef should be developed as a priority.

1.2 Production

Herd numbers in Western Australia are approximately 1.9m head with the Pilbara region contributing approximately 200,000 head. *Source ABS. The current supply chain supplies both the live export market and the processing sector in the south of Western Australia. Approximately 30% of producers have farming properties in the agricultural region of Western Australia. These farms are used in conjunction with the pastoral properties as turn off blocks to finish cattle to specification therefore adding value to the animal. The investment in mosaic irrigation currently being undertaken plans to replicate the value add these farms provide. Droughtmaster, Droughtmaster Cross is the most common bred through the region. However, breed spread includes Angus through to Braham Cross. Previous performance of Pilbara cattle through the MSA program has been acceptable. With increased fodder quality this performance is expected to increase further. The Rangeland production system by default complies with most grassfed assurance programs. HGP and antibiotic usage has been very low in past years. Grain is only usually introduced when cattle are finished through the feedlot. The key risk to the success of any program requiring a consistent supply of a consistent product is the variation seasonal conditions. Mosaic irrigation and the use of southern agricultural properties will mitigate this risk.

The potential for a grassfed program to provide the Rangelands, and in time the wider Western Australian Beef Industry a realistic point of difference and set the framework for a truly integrated supply chain is significant and should continue to be developed further.

This project set out to determine the suitability and willingness of the Rangeland supply chain to comply with MSA, a Grassfed Assurance program, identify market demand both domestic and export and determine processor support.

2 Projective Objectives

2.1 Analysis of Existing Programs

To refine the value proposition and better understand the potential of Rangelands Grassfed Assurance Program the following needs to be scoped out:

(a) Detailed review of PCAS, MSA and other assurance programs, and identify any compliance issues that may impact the success of the program and its adaptability to the rangeland.

(b) Develop recommendations for the basic outline of the program based on the review of these existing programs. For example: Is PCAS and the animal welfare programs the best standards for the rangeland products.

(c) Review proposed supply chain with meat industry professionals to determine the impact on meat quality.

(d) Develop a financial model with estimated returns.

(e) Discussion with water industry experts to determine the projected capability of the current and proposed water developments to deliver the required fodder production to ensure the supply chain can deliver a consistent product.

(f) Determine if southern agricultural farming properties are required in the supply chain to ensure consistent supply of a consistent product.

(g) Review of the existing ethical supply chain and animal welfare programs to determine the impact to the grassfed program. If required, determine how to incorporate these standards into the program.

2.2 Producer Engagement

(a) Develop a questionnaire for producers to determine take up and compliance.

(b) Undertake a survey of the key cattle producers in the region to ascertain their ability and willingness to deliver to an assurance program.

(c) Confirmation that the current production system is capable of complying and that producers are willing to comply with any proposed rangeland assurance program.

(d) Identify existing breed preferences and the ability to meet any (if required) breed requirements to fit the assurance program.

(e) Develop a presentation showing the rangeland, pivots and cattle from the region to use in the market testing.

2.3 Market Demand

Consumer and export demand are the key drivers to the success of this program, therefore it is imperative that testing market demand is undertaken.

(a) Utilising the available resources and the presentation developed in Stage 2 to establish butcher and consumer demand.

(b) Further research grassfed demand in export markets.

(c) After consultation with producers, define the model to market for the product including the optimum sale channel. For example, where does ownership change, at processor or the retail outlet? Is the best option producer funded or do the producers see a partnership with a commercial entity.

(d) Determine the optimum product for retail which primal cuts will be utilised and determine a market for the trim and other non-required product, such as burgers?

(e) Discuss with MLA the minimum and optimal MSA grade for consumers to satisfied and repeat purchase the product (specifically for target market preferences and cooking methods i.e. Chinese cooking methods)

2.4 Processor Capability

Conduct consultation and identify processor partner based on the following criteria:

(a) Compliance to QA specifications.

(b) Location of site relevant to supply.

(c) Export market accreditation – what is the minimum.

(d) Determine the cost per head to process each animal (cost of conversion).

(e) Willingness to partner with producers.

3 Methodology

3.1 Analysis of Existing Programs

A desk top review of existing Pasturefed and Grassfed Assurance Programs from Australia, the United Kingdom and the US was undertaken to determine the ability of the Rangelands to comply to an auditable assurance program. Discussions were undertaken with red meat industry specialists to determine the impact the distance travelled from the Pilbara to the abattoirs in the South West may have on the MSA performance of the cattle in the program. A desktop review of ethical supply chain programs such as Truck Care was also undertaken. Discussions also included water industry expertise to determine the estimated cost of gain, approximate daily weight gain that could be expected and the scope for further investment/development in mosaic irrigation.

3.2 Producer Engagement

Six pastoral properties were visited across the Pilbara to undertake discussions relating to the concept of developing a grassfed program. The properties were selected on the basis of their location and if they had access to water, or owned farms in the south.

3.3 Market Demand

Discussions with local butchers and existing eastern states supply chains were held to determine the current domestic and international demand for grassfed certified product. The US market was researched to determine the growth of grassfed beef and the growth in imports of Australian grassfed beef. Current US pricing was also researched.

3.4 Processor Capability

Onsite visits to a selection of abattoirs were conducted to determine the level of interest from processors in the future development of a certified grassfed program.

4 Results

4.1 Analysis of Existing Programs

4.1.1 Grassfed assurance programs

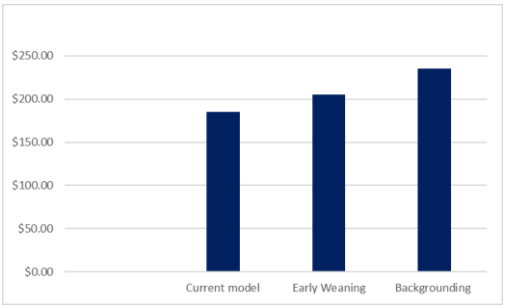
The Pilbara can comply with the principles of a grassfed certification program, as no grain, no antibiotics and no hormone growth promotants are used in day to day operations. The natural production systems of the Rangelands are natural fit for the certification programs. The level of paper work to maintain certification isn't onerous and the Pasturefed Cattle Assurance Program allows for the introduction of weaners from non-accredited properties into the program which will benefit the supply chains ability to deliver a consistent product. This will have equal benefits to both the Pilbara irrigation precincts and the agricultural properties within the supply chain.

4.1.2 Meat Standards Australia

Cattle from the Pilbara have previously performed well under MSA. Whilst only two producers have delivered cattle under MSA, the results confirmed that delivering cattle under MSA was achievable. The cattle were sent straight from the property to the abattoir (a distance of 1400kms) and their performance was acceptable. The cattle came straight off the rangeland in a good year and had no pre-transport preparation i.e. electrolytes prior to trucking. With the introduction of high quality fodder and a pre-trucking program the performance of the cattle is expected to increase even further. The utilisation of a certified southern backgrounding farm will also increase the performance of the cattle in the MSA program.

4.1.3 Financial Model

Modelling was carried out using three different scenarios. The first model looked at selling weaners around 320 kgs straight into the live export market and taking the same cattle into the irrigation precinct and growing out to 500kg for the grassfed market. The second model included weaning calves at 180 kgs and growing out to 320 kgs for live export and 500 kgs to supply the grassfed market. The third model used a weaning weight of 250 kgs trucking to a southern backgrounding property and growing out to 320 kgs for live export and 500 kgs for the grassfed market. The two irrigation models used a cost of gain of $1.60 per kg and the backgrounding model used a cost of gain of $1.40 per kg. despite the current high prices, the market premium being achieved on the east coast is in the range of $.50 per kg live weight.



The indicated profit margin is between $185 and $235 per head.

The current market dynamic and the lack of available pricing for grassfed cattle restricted the modelling to estimated pricing only.

4.1.4 Water Industry Review

Available water and the rate in which pivots are being established (approval times are an issue) in the Pilbara will deliver enough high quality fodder to allow the grassfed project to deliver viable numbers. A variety of high quality grasses including Lucerne have been grown in various trials and weight gains of 1 kg per day on average have been achieved on cattle over 250 kg lwt. The location of the current pivots is well suited as they are situated close to the bitumen road and have all year access for heavy transport. In some cases, the pivots operate off the artesian basin and are flowing at approximately 40psi. This further reduces the cost of production by reducing power requirements, and thereby reducing the cost of gain per kilogram. There are large quantities of available water still not being utilised from mine site dewatering in the Pilbara. However, this has limitations due to the uncertainty of water use once a mine site closes. In the event of a mine closure, certainty of water use can be established the scope to further develop cost effective irrigation precincts is significant.

4.1.5 Supply Chain

The project identified that in the initial stages, a southern agricultural property will be required purely to allow transport costs to be contained. As the project develops the required numbers are expected to be small therefore sending commercial consignments (six deck lots) south and still meeting MSA standards will not be possible. To maintain MSA eligibility, cattle trucked south must spend 30 days in residence on a farm before becoming MSA eligible again. The farm will be required to run a peak number of 240 head to allow a consistent supply based on 20 animals per week. This will allow six deck consignments to be trucked to the farm and be compliant with MSA. As the demand for the product increases and the confidence of producers to supply increases the requirement for this farm may be removed, thereby further reducing the costs structure. As the project progressed the need for inclusion of other regions in Western Australia into the supply chain became apparent.

4.1.6 Animal Welfare

Whilst there are several animal welfare programs in the livestock sector, no program covers the complete supply chain. Existing programs only cover a particular segment of the supply chain. A fully integrated animal welfare program based on ethical production should be developed to further promote the grassfed program.

4.2 Producer Engagement

4.2.1 Questionnaire Results

The project undertook on-property visits throughout the Gascoyne and Pilbara region to discuss the proposed program and questionnaire. A summary of the responses are listed below:

- Awareness of PCAS was high with 100% of producers aware of the program.
- All producers had some knowledge of the audit requirements all be it limited.
- Producers were uncertain of the price premium for PCAS certified beef.
- There was a full understanding of the organic beef process by two of the surveyed producers with the remaining producers having some awareness of the organic process.
- HGPs were not used by any of the producers surveyed.
- Two Gascoyne producers have supplied cattle under the MSA, the remaining producers had not supplied cattle into the MSA program.
- The remaining producers had an awareness of the MSA process however, MSA was seen as a program for the agricultural region.
- Thirty percent of the surveyed producers have access to irrigation and are currently developing their irrigation capacity.
- 30 percent owned farming country in the south and used the farms in their own supply chain. Due to the location of these farms being in the Midlands region, PCAS certification would have limited application due to the seasonal variances.
- Producers would consider small adjustments to their breed selection however not over their entire herd.
- 83 percent were very interested in being involved in any future PCAS trial.

4.2.2 Producer Up Take

Producers on the whole were very interested in further developing a PCAS model for their region and saw value in implementing a trial in the near future. They also sought further investigation into a rangeland branded product that promoted the regions ability to produce a clean safe product for both the domestic and international market. This could be picked up within the animal welfare program as well. Producers surveyed were interested to work as part of the overall supply chain to deliver a consistent product 12 months of the year.

4.2.3 Breed Preference

Breed preference throughout the Pilbara is diverse ranging from Braham, Santa Gertrudis, Droughtmaster and Shorthorn and their various crosses. The most common breed of those surveyed was Droughtmaster. Breed preference is based on personal preference with the common belief that cattle need to be bred to survive in the Rangelands. Within the surveyed group there was some intent to introduce Red Angus genetics into a Droughtmaster herd. The key benefits of such a cross were believed to be a better carcass for domestic processing and a heavier weaner for export at an earlier stage.

4.3 Market Demand

4.3.1 Domestic Market

The traditional market supply in Western Australian is predominately grain fed product. Grass finished product from the southern agricultural region becomes available during the spring flush. The variances in the Western Australian seasonal conditions has had a detrimental impact on the continued supply of a certified grassfed product. Aside from Woolworths, the volume of grassfed branded products in the domestic market is limited to a few small producer backed enterprises. Currently none of the processors in Western Australia have a branded grassfed certified product. There is one processor with an organic brand. The available organic product and the grass finished product creates some confusion in the market as to what a grassfed certified product is. The domestic market reaction to a certified product backed by MSA was strong however the product will need to be proven both in quality and price premium.

To determine the retail value of carcass a review of current supermarket prices was undertaken on grain fed MSA product. The retail value for a 500 kg lwt animal is approximately $3,165.

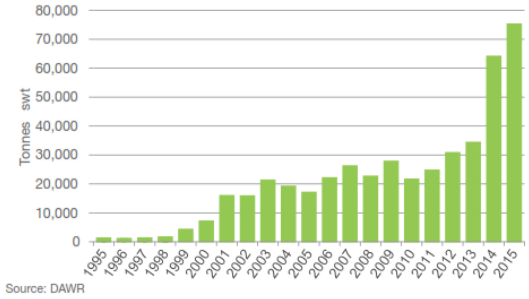
	Live weight	500		
	Yield	52.00%		
	Adjust the Cold Carcass weight and all cuts will be automatically calculated by %			
	Cold carcass weight:	260.00 kg		
	Cutup to Retail Value			
cut %	Cut	Weight(kg)	Price ($/kg)	Total ($)
3.51%	Blade	9.14	16.00	146.18
1.39%	Oyster blade	3.60	16.00	57.64
3.59%	Chuck	9.32	15.00	139.84
2.03%	Scotch fillet	5.27	37.00	195.10
0.65%	Skirt	1.70	14.00	23.76
2.28%	Porterhouse	5.93	33.00	195.69
4.32%	T-bone	11.22	21.00	235.72
4.18%	Rump	10.86	20.00	217.19
0.78%	Eye fillet	2.04	40.00	81.45
3.26%	Round	8.49	19.00	161.27
5.30%	Top side	13.79	16.00	220.61
5.54%	Silver side	14.41	16.00	230.55
2.13%	Osso bucco	5.54	6.00	33.22
3.14%	Shin beef	8.17	12.00	98.05
19.35%	Mince	50.31	17.00	855.21
9.26%	Sausage	24.07	6.00	144.41
	Offal + Hides			130
70.71%	Total Saleable Meat*	183.85 kg		**$3,165.90**
	*excl bone and fat			

4.3.2 International Market

The demand for certified grassfed product in the US continues to grow with some commentators in the US suggesting that grassfed product will increase to be 25% of the beef market in the next few years. The surge in grass fed demand in the US has led to the USDA starting a month report purely for grass fed product. The latest June report indicates pricing in the range of US$270 – US$350 per cwt or US$5.31 - US$6.88 dressed and delivered to the plant. Converted back to AUD this is in the range of AU$7.17 – AU$9.30 per kg.

Currently the over-the-hook premiums on the eastern seaboard of Australia for certified grassfed product for the US market are reported to be in the range of 15-20% over current grain fed prices. Asian demand for grassfed product is limited at this stage. However, the clean safe attributes of grassfed certified beef will insure market demand increases for this product.

Figure 24. Chilled grassfed beef exports to the US



Increase in exports of grassfed product to the US. Source DAWR and MLA

4.3.3 Model to Market

There are several alternate model to market options for the domestic market. All the options have varying degrees of risk and therefore reward associated with them. Generally, producers are reluctant to venture down the supply chain due to the risk profile associated with retaining ownership. Therefore, the project requires a processor to partner with producers.

Traditional model of over the hooks/live weight price delivered to the abattoir.

- Lower returns due to lower risk exposure and sharing the profit with the retailer

Retained ownership option 1: Service kill with point of delivery at the butcher shop.

- Higher returns possible (subject to the cost of conversion charged)
- A level of risk associated around financial exposure, product ownership and waste
- Requires capital, management and staff

Retained ownership Option 2: Service kill and with shop front ownership

- Higher returns achieved (subject to the cost of conversion charged)
- Higher level of risk due to product ownership, wastage and costs associated with store ownership

- Requires large amounts of capital, management and staff

The international market requires scale to warrant the exposure past the farm gate. Involvement in the international market requires a high level of expertise and delivers an increased level of risk to any retained ownership model. Whilst the rewards can be substantial the risk to small producers far outweighs the rewards.

In summary, the model to market initially would be the traditional model. To maximise the return of any animal the various cuts need to be marketed to the highest market. This ensures that product is sold between both the domestic and international market. There is however, scope once the grassfed model reaches a scalable size and has consistent supply to integrate further down the supply chain.

Producers who formed a supply chain group could have more control of the product down the supply chain purely by creating a business entity with scale.

4.4 Processor Capability

The project researched segments of the domestic processing sector in Western Australia. All export abattoirs are required under the *Australian Meat and Live-Stock Industry Act 1997* to be AUS MEAT accredited and constantly monitored to ensure compliance with the AUS MEAT standards. All export licensed plants operate under the Australian Standard for Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS4696:2002) which is based on world's best practise and is consistent with the ISO 9001:2000 standard. HACCP based quality assurance is mandatory for all Australian export abattoirs. Compliance by the abattoirs with the grassfed assurance program will be achievable.

The location of the abattoirs to the Rangelands has both disadvantages and advantages. The distance of the abattoirs from the Rangelands is a disadvantage due to freight costs, time on trucks and the impact this has on MSA grading. The advantages are: the ability to background and grow out weaners close to the abattoir, include cattle from other regions of Western Australia to create the required scale to meet demand, and develop a recognised brand.

In the future, the focus on increased cattle production and utilisation of the vast water reserves across Northern Australia will bring the abattoirs at Darwin and Broome into the grassfed supply chain.

The Western Australia processing sector has a range of export accreditations to meet all the main importing country requirements. Market access is covered across all markets for grassfed beef.

The processors all expressed support for the program's development and could see the potential in further developing the grassfed supply chain. All agreed that the program should be expanded to include all areas of Western Australia.

The only concerns were the supply chains ability to supply a consistent product throughout the year and the threat of other segments of the supply chain to the ongoing supply of cattle.

5 Discussion

5.1 Potential for Rangeland Grassfed Assurance Program in Western Australia

Is there potential for a Grassfed Assurance Program in Western Australia? In short the answer is yes and it needs to be expanded to incorporate all cattle producing regions of Western Australia.

While Western Australia's climate can be harsh and rainfall can be unreliable, the current cattle prices and the investment in mosaic irrigation has meant that certified grassfed beef can be produced in Western Australia. The inclusion of other regions within the state will only benefit the supply chain's development. Producers understand they need a point of difference in the domestic and global markets, and that by utilising a grassfed accreditation program, they achieve this point of difference. The Western Australian supply chain needs to move from the traditional models to a more sustainable model in the future.

The potential to develop the grassfed brand throughout Asia and in particular China is only being held back by our ability to supply product. China's demand for clean safe food and the projected shortfall in beef production is well documented. As the accredited grassfed supply chain develops further the Asian market holds more potential than the current US market. Significant focus needs to be directed on the continued development of the certified grassfed brand.

The project has established the following:

- That a grassfed assurance program is achievable in the Rangelands using mosaic irrigation
- The producers are able to deliver a consistent supply of a consistent product by utilising irrigation and incorporating southern agricultural properties
- MSA can and has been achieved from the region
- Pasturefed Cattle Assurance Program is fit for purpose
- The approval process for further water development and the uncertainty of mine site dewatering are the only inhibiting factors to sustainable growth of irrigation precincts in the Rangelands
- Domestic and Export market demand is greater than supply
- Processor support is high. Selection of the preferred processor should be established after further trials are conducted and be based on their individual performance through the trial
- The future supply chain needs to include other regions of Western Australia
- The global consumer is demanding a more sustainably produced product and is prepared to pay for it

Further work is required to develop the supply chain further. The key areas are:

- Monitor daily weight gain, both stand and graze and cut feed and feed and determine preferred fodder
- Confirm cost of production, both stand and graze and cut feed and feed
- Monitor the impact on calving rates and weaning rates of early weaning
- Measure the effect on MSA grading scores of using electrolytes prior to transport
- Link MSA performance to fodder and grazing source including backgrounding farm
- Inclusion of other regions (Midlands, South West, Great Southern and Esperance) into the supply chain and their ability to comply with PCAS
- Measure the performance of these regions to MSA and determine the optimum period of grassfed supply based on the regions performance
- Determine if the MSA ratings vary between rangeland and agricultural production. What is the impact if any on the market demand?
- Investigate the development of a producer supply chain group
- Develop the business case to seek funding for the supply chain and further market development

6 Conclusions/Recommendations

The introduction of a certified grassfed beef program into the Western Australian beef industry creates a sustainable product that matches global trends away from grain fed beef. It utilises the vast water resources in the north of the state to create another market alternative to producers. Based on the estimated returns of between $180 and $220 per head and a supply chain delivering 100,000 head it creates approximately $20m in extra revenue for producers with little change to their day to day operations. The benefits of early weaning will also add extra returns in the Rangelands.

The future supply chain development outlined is required to further provide proof of concept and encourage development of a state wide supply chain allowing investment to support the project. The business principals are sound and with investment the supply chain can look at integrating closer to the global consumer.

7 Key Messages

Most cattle producers in Western Australia can comply with the requirements of PCAS with very little change to their day to day management.

The global market is demanding a cleaner, sustainably and ethically produced product and is prepared to pay for it.

The Western Australia beef industry can deliver this product.

Western Australian Beef producers should join together to form a supply chain company and unlock the value chain post the farm gate.

8 References

Pasturefed Cattle Assurance System

http://www.pcaspasturefed.com.au/

American Grassfed Association

http://www.americangrassfed.org/

UK Pasture for Life

http://www.pastureforlife.org/why-pasture/certification-standards/

http://sustainablefoodtrust.org/partners/the-pasture-fed-livestock-association/

Ethical Production

http://www.globalanimalpartnership.org

USDA grassfed report

https://www.ams.usda.gov/mnreports/nw_ls110.txt

Various Industry information

https://www.mla.com.au/Home

List of US accredited abattoirs

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9 Appendix

9.1 Producer survey results

	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6
Have you heard of PCAS	Yes	Yes	Yes	Yes	Yes	Yes
Are you aware of the registration process for PCAS	Aware but not fully	Aware but not fully	Aware but not fully	No	No	Yes
Are you aware of the price premium for PCAS beef	Aware	Aware	Aware	Aware	Aware	Aware
What's your understanding of organic beef certification process	High	High	To hard	High	Aware but not fully	Aware but not fully
Do you use HGPs	No	No	No	No	No	No
Have you ever registered for MSA	Yes	Yes	No	No	No	No
How much do you understand about MSA	Aware	Aware	Aware	Aware	Aware	Aware
Do you have access to irrigation	No	No	No	Yes	Available but unable to access	Yes
If so, what's the capacity	NA	NA	NA	Limited by regulation	Limited by regulation and access	Limited by regulation
Do you own farming country in the south	Yes	Yes	No	No	No	No
If so would you be interested in having it certified for PCAS	Interested	Interested	NA	NA	NA	NA
Would you consider changing your bull/ breed selection	If results proven over part of the herd	Possible	Thinking about it now over a small number of cows	If results proven on a small scale	Probably not as already have	If results proven on a small scale
Are you interested in being part of a PCAS trial?	Yes	Yes	No	Yes	Yes	Yes

9.2 Workings

CURRENT MODEL

LIVE EXPORT			GRASSFED	
	PER HEAD	TOTAL	PER HEAD	TOTAL
Sex	Male		Male	
Number		1000		1000
Weight	320	320000	500	500000
Sale price	$3.20		$3.20	
	$1,024.00	**$1,024,000.00**	**$1,600.00**	**$1,600,000.00**
VARIANCE			**$576.00**	**$576,000.00**

COST OF GAIN				
CoG per kg			$1.60	
Entry Weight			320	
ADG			1.5	
Total Weight			500	
Kg gained			180	180000
Days on Feed			120	
CoG per head			**$288.00**	**$288,000.00**

FREIGHT COSTS				
Rate per KM	$1.70		$1.40	
Dist	650		1600	
Cost per Deck	$1,105.00		$2,240.00	
No Decks	6		6	
Total	$6,630.00		$13,440.00	
Head	160		140	
Kgs	51200		70000	
Cost per kg	$0.13		$0.19	
PER HEAD	**$41.44**	**$41,437.50**	**$96.00**	**$96,000.00**

LIVESTOCK COSTS				
Induction			$5.00	$5,000.00
Tags			$5.00	$5,000.00
Other				
Adgistment			$35.00	
Internal freight			$10.00	$10,000.00
PER HEAD	**0**		**$55.00**	**$20,000.00**

FINANCE & ADMIN COSTS					
Interest	0%			$0.00	
Ownership change					
Commission	3%	$30.72	1.50%	$24.00	
		$30.72	$30,720.00	**$24.00**	**$24,000.00**

TOTAL COSTS	**$72.16**	**$72,157.50**	**$463.00**	**$428,000.00**
NET RETURN	**$951.84**	**$951,842.50**	**$1,137.00**	**$1,172,000.00**
			$185.16	**$220,157.50**

Current Model	Live Export	Grassfed
Sale Value per Head	$1,024.00	$1,600.00
Cost of Gain	0	$288.00
Freight Costs	$41.44	$96.00
Finance & Admin	$30.72	$24.00
Net return	$951.84	$1,137.00
Variation		$185.16

BASED ON EARLY WEANERING

LIVE EXPORT			GRASSFED	
	PER HEAD	TOTAL	PER HEAD	TOTAL
Sex	Male		Male	
Number		1000		1000
Weight	320	320000	500	500000
Sale price	$3.20		$3.20	
	$1,024.00	**$1,024,000.00**	**$1,600.00**	**$1,600,000.00**
VARIANCE			**$576.00**	**$576,000.00**

COST OF GAIN				
CoG per kg	$1.60		$1.60	
Entry Weight	180		180	
ADG	1.2		1.2	
Total Weight	320		500	
Kg gained	140		320	320000
Days on Feed	117		267	
CoG per head	**$224.00**	**$224,000.00**	**$512.00**	**$512,000.00**

FREIGHT COSTS				
Rate per KM	$1.70		$1.40	
Dist	650		1600	
Cost per Deck	$1,105.00		$2,240.00	
No Decks	6		6	
Total	$6,630.00		$13,440.00	
Head	160		140	
Kgs	51200		70000	
Cost per kg	$0.13		$0.19	
PER HEAD	**$41.44**	**$41,437.50**	**$96.00**	**$96,000.00**

LIVESTOCK COSTS					
Induction		$5.00		$5.00	$5,000.00
Tags		$5.00		$5.00	$5,000.00
Other					
Adgistment				$35.00	
Internal freight		$10.00		$10.00	$10,000.00
PER HEAD		**$20.00**	**$20,000.00**	**$55.00**	**$20,000.00**

FINANCE & ADMIN COSTS					
Interest	0%			$0.00	
Ownership change					
Commission	3%	$30.72	1.50%	$24.00	
		$30.72	$30,720.00	**$24.00**	**$24,000.00**

TOTAL COSTS	**$316.16**	**$316,157.50**	**$687.00**	**$652,000.00**
NET RETURN	**$707.84**	**$707,842.50**	**$913.00**	**$948,000.00**
			$205.16	**$240,157.50**

Early Weaning	Live Export	Grassfed
Sale Value per Head	**$1,024.00**	**$1,600.00**
Cost of Gain	**$224**	**$512.00**
Freight Costs	**$41.44**	**$96.00**
Finance & Admin	**$30.72**	**$24.00**
Net return	**$707.84**	**$913.00**
Variation		**$205.16**

SENDING SOUTH

LIVE EXPORT			GRASSFED	
	PER HEAD	TOTAL	PER HEAD	TOTAL
Sex	Male		Male	
Number		1000		1000
Weight	320	320000	500	500000
Sale price	$3.20		$3.20	
	$1,024.00	**$1,024,000.00**	**$1,600.00**	**$1,600,000.00**
VARIANCE			**$576.00**	**$576,000.00**

COST OF GAIN				
CoG per kg	$1.40		$1.40	
Entry Weight	250		250	
ADG	0.8		0.8	
Total Weight	320		500	
Kg gained	70		250	250000
Days on Feed	88		313	
CoG per head	**$98.00**	**$98,000.00**	**$350.00**	**$350,000.00**

FREIGHT COSTS				
Rate per KM	$1.40		$1.40	
Dist	1600		1600	
Cost per Deck	$2,240.00		$2,240.00	
No Decks	6		6	
Total	$13,440.00		$13,440.00	
Head	160		160	
Kgs	40000		40000	
Cost per kg	$0.34		$0.34	
PER HEAD	**$107.52**	**$107,520.00**	**$168.00**	**$168,000.00**

LIVESTOCK COSTS					
Induction		$5.00		$5.00	$5,000.00
Tags		$5.00		$5.00	$5,000.00
Other					
Adgistment				$35.00	
Internal freight		$10.00		$10.00	$10,000.00
PER HEAD		**$20.00**	**$20,000.00**	**$55.00**	**$20,000.00**

FINANCE & ADMIN COSTS					
Interest	0%			$0.00	
Ownership change					
Commission	3%	$30.72	1.50%	$24.00	
		$30.72	$30,720.00	**$24.00**	**$24,000.00**

TOTAL COSTS	**$256.24**	**$256,240.00**	**$597.00**	**$562,000.00**
NET RETURN	**$767.76**	**$767,760.00**	**$1,003.00**	**$1,038,000.00**
			$235.24	**$270,240.00**

Southern Farms	Live Export	Grassfed
Sale Value per Head	$1,024.00	$1,600.00
Cost of Gain	$98	$350.00
Freight Costs	$107.52	$168.00
Finance & Admin	$30.72	$24.00
Net return	$767.76	$1,003.00
Variation		$235.24

9.3 USDA Grassfed Report

NW_LS110
Des Moines, IA Fri, Jun 24, 2016 USDA Market News

NATIONAL MONTHLY GRASS FED BEEF REPORT
For the Month of June

Report includes prices on a dressed carcass, wholesale, and direct marketed basis for grass fed beef. Dressed prices are quoted per hundred pounds, with wholesale and direct meat prices quoted per pound.

NEGOTIATED
Prices Paid for Domestic Slaughter Steers and Heifers:

	($/cwt FOB Plant)
Dressed Basis Steers/Heifers	270.00 - 350.00 (Select)

GRASS FED BEEF - Wholesale	($/lb)
Chuck Roll	3.65 - 8.53
Shoulder Clod	5.89 - 13.65
Ribeye, Boneless, Whole	16.58 - 18.95
Short Loin	
Tenderloin, Whole	24.99 - 44.00
Striploin, Whole	
Top Sirloin Butt, Whole	12.89 - 24.66
Knuckle, Peeled, Whole	3.11 - 5.50
Round Cut	5.39 - 8.88
Top Round, Inside	5.89 - 8.59
Bottom Round	5.39 - 9.41
Eye of Round	6.09 - 8.89
Brisket, Whole	6.09 - 12.25
Short Ribs	8.08 - 10.49
Flank Steak	
Skirt Steak	10.89 - 12.89
Hanger Steak	7.92 - 13.70
Ribeye Steak	17.44 - 25.03
New York Steak	20.05 - 28.00
Sirloin Steak	12.03 - 12.89
Stew Meat	6.89 - 10.49
Beef Oxtail	5.72 - 10.49
85/15 Bulk Trim, 20 lb Vac Pack	
80/20 Ground Beef 20 lb Vac Pack	5.59 - 7.99
85/15 Ground Beef, 5 lb Vac Pack	5.79 - 9.95
90/10 Grnd Bf, 1 lb Vac Pk, 40/case	6.81 - 9.95
90/10 Ground Beef, 4/1 lb Patties	8.57 - 13.30
Hot dogs	7.49 - 12.25

Beef Liver, 5 lb Vac Pac	1.99 -	4.99	
Beef Heart, 5 lb Vac Pac			
Beef Tongue, 5 lb Vac Pac	4.09 -	5.99	
Beef Bones	4.99 -	5.50	
GRASS FED BEEF - Direct (FOB)	($/lb)		Avg
Ribeye Steak	20.50 -	39.98	26.12
Filet Mignon	30.50 -	42.00	36.88
Striploin Steak			
Sirloin Steak	12.00 -	18.00	14.55
Flat Iron Steak	12.99 -	15.00	14.00
Tenderloin	46.99 -	59.98	53.49
Rib Roast	10.39 -	19.99	16.46
Sirloin Roast	7.25 -	13.22	9.14
Chuck Roast	6.25 -	10.98	8.57
Round Roast	7.25 -	12.24	8.80
Short Ribs	6.69 -	7.50	7.10
Flank Steak	13.00 -	16.00	14.11
Skirt Steak			
Brisket	7.80 -	11.80	9.78
Rump Roast	7.25 -	12.24	9.67
Stew Meat	6.69 -	13.30	8.90
Beef Shanks	7.50 -	12.82	10.55
Oxtails			
Ground Beef, 90/10, Bulk	8.79 -	11.58	10.66
Ground Beef, 90/10, Patties	8.79 -	12.52	10.57
Ground Beef, 85/15, Bulk	7.25 -	9.99	8.34
Ground Beef, 85/15, Patties	7.75 -	11.15	9.45
Ground Beef, 75/25, Bulk			
Ground Beef, 75/25, Patties			
Frankfurters	7.99 -	23.97	13.47
Jerky	32.72 -	53.28	45.44
Beef Liver	1.99 -	8.47	4.74
Beef Heart	3.50 -	6.64	4.88
Beef Tongues	3.75 -	6.87	5.38
Beef Bones	2.50 -	3.50	3.17

Source: USDA Market News Service, Des Moines, IA
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24 Hour recorded market information 515-284-4830
www.ams.usda.gov/mnreports/NW_LS110.txt
www.ams.usda.gov/LPSMarketNewsPage

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9.4 Supporting attachments


Workings .xlsx

USD June GF Report.pdf


Producer survey information .xlsx