PROJECT REPORT
& ACTION PLAN

Version 1

Noosa
Beef & Local Food System
Research

By: Dr Brian Stockwell
Watershed Australia

Survey response: Most important Values of Rural Noosa

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Client:	*Country Noosa*
Contact:	Mr Dick Barnes
Prepared by:	Watershed Australia
Project Team:	Dr Brian Stockwell Bill Johnstone (Agricultural Economics) Graeme Elphinstone (MRCCC – Grazing Systems) Brad Wedlock (MRCCC- Grazing Systems)
Phone:	07 5447 4638
Mobile:	0422 944 231
Email:	brian@watershedaustralia.com

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EXECUTIVE SUMMARY

Introduction

The Noosa Shire is a district of approximately 83, 000 ha in sub-tropical South East Queensland. The shire straddles the Sunshine Coast, Mary Valley and Great Sandy Regions and shares social, cultural, economic and biogeographic links to all three. Noosa has a long history of dairying, grazing, small crops, tree crops and bananas but a mix of plant pathogens (e.g. bunchy top in bananas), escalation of fertilisers prices (demise of coastal "wallum" grazing scheme) and deregulation (dairying) resulted in a significant decline in traditional forms of agriculture in the last half of the 20th century. As these industries declined so did the processing facilities upstream (e.g. abattoirs and butter factories). Government science and extension support subsequently declined.

Previous South East Queensland research has indicated an emerging interest in buying locally and a high level of food awareness and identification with the region. Wright's (2012) report on interviews with medium to large food manufacturers and Birch's (2012) consumer survey identified strong interest in increased local food and regional food supply. Both residents and tourists suggested the five most significant barriers to consumption of local food were:

- its lack of promotion;
- lack of information on where to find it;
- that it is not clearly branded as local;
- that it is not readily available; and
- that it is not well labelled.

Many alternative agriculture approaches common in local food systems globally (e.g. selling direct to retailers, farmers markets, farm gate sales and online ordering) are currently in their early phases of adoption in Noosa. The project adopted a sustainable value chain diagnostic methodology to investigate how to improve the flow of information and material along existing values chains and to assess opportunities for adding additional value to the shire-wide local food network through better relationships, enhanced infrastructure and communication through the supply chain.

This project built on this research and sought to gain a more detailed and localised understanding of the level of consumer and value chain support for local food (particularly pasture fed beef) and to identify opportunities to gain better access for local produce generally to the market place.

Project Objectives

The objectives of the project were to:

- Research local food supply chains.
- Research how to increase sustainable production from grazing lands.
- Investigate opportunities & constraints to local processing and distribution of sustainable pasture fed beef.
- Investigate how to improve the flow of information and material along existing values chains.
- Assess opportunities for adding additional value to the shire-wide local food network.
- Assess the potential for shared distribution systems, food hubs, grower cooperatives and the like.
- Review the potential to build local brand recognition in order to increase consumption and value to the producer.
- Identify mechanisms to improve the profitability of the beef value chain to producers.
- Produce an Action Plan that enhances the sustainability and resilience of beef production and the local food system.

Results

Country Noosa conducted a mix of on-line and face to face surveys of local graziers and consumers. The results inform the action plan to drive growth in the local/ regional food system in a way that meets consumer preferences and builds the capacity of local farmers and graziers. The key results are outlined below.

Graziers

- About three-quarters of graziers surveyed were interested in pursuing options to connect to a local value chain built on respectful relationship and equitable share of earnings throughout the chain.
- The vast majority of current production meets the consumer preference of being pasture fed with minimal use of agricultural or veterinary chemicals
- Graziers (some are mixed enterprises) felt the absence of a local abattoir that ethically catered for beef, sheep, chickens etc. was the largest constraint to growing the local meat value chain

Consumers

- 60% of respondents were highly committed to buying local food
- 75% of respondents actually specifically buy local produce once or more times per week
- Supporting local producers was by far the most important reason for this practice followed by freshness, supporting the local community and reducing food miles
- There was very strong support for a local beef product with a strong preference for purely grass fed grazing systems
- Consumers would place high importance on a brand if it showed the product was accredited to meet animal welfare, organic, sustainable agriculture and grass fed beef standards
- Of least interest to consumers was a Noosa Biosphere accreditation, and this may reflect that most people thought that local food for them extended to include produce from the broader Sunshine Coast - Mary Valley region.
- Free range production was a touchstone issue with significant concern expressed about intensive, chicken, egg and pig production systems
- The most common place people said they would prefer to purchase local meat products from was the local butcher, followed by IGA Supermarkets. More respondents suggested they were more likely to buy direct from the farmer than from the big two supermarkets.

In general survey respondents reported they bought local food more often than a previous survey in South East Queensland and placed a higher level of importance on, clean, green and ethical production systems than a 2006 Australia wide survey.

Value Chain Purchasers

- Numerous opportunities were identified in interviews buyers of local fruit and vegetable and meat for wholesale and retail sale.
- Unmet demand coupled with spare capacity within local and regional processing enterprises and storage facilities run by people with a commitment to local food systems suggests there is ample opportunity for growth.
- Some graziers are already using on-line sales portal that aggregates products from a range of producers to give the consumer a broader selection within a virtual one-stop shop.

Benefit Cost Analysis

A Benefit Cost Analysis (BCA) was conducted to identify the relative economic potential of different grazing development scenarios in Noosa Shire. A 10 year time frame was adopted for the analysis with an adoption

profile set to achieve nearly complete adoption of the scenario within this time frame. The analysis suggests that without an active program to enhance the adoption of best management practices and to promote growth in the industry there is likely to be very little gain over the next decade from the 'status quo' scenario. However, there are a range of scenarios that it is felt could realistically achieve an Net Present Value (NPV) of between $3-7 million (gross margin). Both the 'Managed Estate' and 'Local Landscape Collaborative' scenarios have the potential to drive growth in the order of $7million NPV over the next 10 years, based on an additional investment of $2million over this period in extension and learning programs and modest investment in pasture improvement (offset by increased c/kg for turned off animals).

The Marketing Cooperative Model was estimated to have the potential for the highest rates of return as increased income is included in this scenario as a result of improved farmer profit from direct sales mechanisms. However, this scenario was considered by the reference committee of key stakeholders to have a below average chance of adoption, based on the inherent difficulties and current stressors associated with running vertically integrated direct sales farms.

While there are many factors that will affect the future of grazing in Noosa this analysis is sufficiently robust to provide a case for further investment in the development of a local beef production system focussed on the local/regional food market.

Action Plan

The objective of the action plan is to enhance the sustainability and resilience of beef production and the local food system. The plan is structured on several desired outcomes which have been identified as the most important characteristics that assist the development of a resilient community as summarised below.

Desired Outcome A: A diverse and innovative economy

1. Establish a rural enterprise brokerage as a social enterprise
2. Conduct an innovative marketing campaign promoting Noosa produce
3. Encourage the Initiation of a 'local', 'sustainable' & 'free range' meat provedore enterprise

Desired Outcome B: Knowledge skills and learning

4. Seek funding & implement an integrated area-wide best management program for producers
5. Build the marketing capabilities and business acumen of direct selling producers
6. Advocate for greater public education and training delivery aligned to local food industry needs
7. Instigate and develop active participatory action research collaborations with regional universities

Desired Outcome C: Community infrastructure

8. Investigate the opportunities to establish a cooperative 'bird-to-beast' abattoir
9. Investigate opportunities for establishing farm & 'local food' business incubator for small start-ups

Desired Outcome D: Engaged governance (& Values & Beliefs)

10. Country Noosa incorporates and takes on a key role in the governance of rural enterprise in Noosa
11. Advocate for statutory planning settings that foster sustainable local food system development

Desired Outcome E: People–place connections (& Values and Beliefs)

12. Develop and phase the introduction of a Noosa food brand or appellation

Desired Outcome F: Social networks

13. Continue to develop relationships and commitment to a values-based supply chain for local food

Leadership and Positive Outlook

14. Country Noosa initiates and coordinates the delivery of a 'Building Rural Leaders' program

This version of the action plan is subject to further discussions amongst Country Noosa collaborators.

DEFINITIONS

The following terms have been defined to ensure the clarity of their use throughout this report.

Food System - food systems comprise all aspects of food production from the way food is grown or raised, harvested or slaughtered, processed, packaged, distributed, transported and sold to consumers. Food systems involve the whole supply chain from the paddock to the plate.

Local (or Regional) Food Systems - are systems that aim to connect food producers and consumers in the same locality or region. Local or regional food systems tend to be associated with sustainable agriculture rather than larger scale industrial agriculture and are focussed on values-based supply chains rather than national or international ones. They aim to improve local economies and have a positive impact on the environment, health and social well-being of communities and make food networks more self-reliant and resilient.

In this study we are using 'local' to refer to areas within, and immediately adjacent to, the Noosa Shire and "region" to refer to the Sunshine Coast and Mary Valley within about 160 kilometres of Noosa.

Pasture Fed Cattle - Cattle that have open access to graze pasture their entire life and have not been confined for the purposes of intensive feeding for production and are free from hormone growth promotants.

Peri-Urban Areas - the transitional zone between rural and urban landscapes that mediate between the competing pressures of agriculture and urbanisation, development and conservation, settlement and production, growth and sustainability.

Sustainable Agriculture (or Production) - An integrated system that aims to satisfy human needs for food and fibre over the long term through:

- making the most efficient use of non-renewable and on farm resources
- enhancing environmental quality and conserving the natural resource base upon which production depends
- integrating, where appropriate, natural and biological cycles and controls
- sustaining the economic viability of farm operations, and
- improving the quality of life of farmers and the community more broadly.

Values-Based Supply Chain - Supply chains where producers, processors, distributors, wholesalers, retailers and restaurants work together in equitable relationships based on trust to pass on to the consumer information about the social, environmental and/or community values incorporated into the products or the farm producing it. The collaboration is structured so that everyone along the chain benefits, generally providing farmers with a greater share of the profit generated.

BACKGROUND

The Noosa Shire is a district of approximately 83, 000 ha in sub-tropical South East Queensland. The shire straddles the Sunshine Coast, Mary Valley and Great Sandy Regions and shares social, cultural, economic and biogeographic links to all three. Known internationally for its management and retention of iconic natural values the community has run active programs over the last 40 years to increase the extent of protected public land to nearly 25,000 hectares which is designated as a core area of the UNESCO Biosphere Reserve. Remnant vegetation (40, 611 ha) and regulated regrowth vegetation (6,170 ha) cover in excess of 50% of the shire.

Respected for its pursuit of the principles of ecologically sustainable development and its distinctive low impact design style the shire has a modest urban footprint (abt. 2,500 ha). With extensive rural subdivision since the 1980s a large part of the hinterland has been converted to lifestyle sized rural residential blocks. However, there is still large tracts of land in the Shire that are suited to agriculture with the majority of that best suited to grazing. The opportunities for the Shire's economy to benefit from the reconfiguration of productive landscapes and the re-localisation of food systems are considerable and are the subject of investigations discussed in this report.

Noosa has a long history of dairying, grazing, small crops, tree crops and bananas but a mix of plant pathogens (e.g. bunchy top in bananas), escalation of fertilisers price (demise of coastal "wallum" grazing scheme) and deregulation (dairying) has resulted in a significant decline in traditional forms of agriculture. As these industries declined so did the processing facilities upstream (e.g. abattoirs and butter factories). Government science and extension support subsequently declined. This restructuring of the rural economy together with significant growth of amenity-led migration has resulted in large demographic changes in rural (or more accurately peri-urban) Noosa. This has resulted in the loss of much of the long-standing local knowledge about management challenges such as floods, fire and drought.

State government land suitability mapping suggests there is at least 9,300 ha of land best suited to pastures and a further area that is also suited to horticulture and cropping. Recent informal land use survey data from Country Noosa suggests that grazing of some type occurs on up to 8,300 ha. However, current anecdotal evidence suggests much of the rural land estate is under-utilised. Low levels of land management, and land literacy of new residents represent significant threats, particularly to invasion by weeds and pests that can result in diminishing rural appeal to residents and tourists alike. Allowing the hinterland to become a dormitory suburb on big blocks therefore represents a significant economic risk. This can be mitigated by active programs to foster sustainable agriculture and values-based food supply chains that meet the demands and values of urban and peri-urban consumers.

This project was therefore conceived after the most recent drought when many local farmers were able to maintain their herd but their viability was threatened by poor market conditions, as cattle from drier areas were destocked, flooding the market and driving prices down. This led to both financial and emotional distress amongst local graziers. Around the world there is a growing trend in similar communities to drive enhanced resilience and sustainability through the development and coordination of local or regional food systems. Underpinning such growth is massive changes in consumer preferences that prioritise local, healthy and natural foods.

Previous South East Queensland research has indicated an emerging interest in buying locally and a high level of food awareness and identification with the region. The project therefore sought to gauge the level of consumer and value chain support for local pasture fed beef and to identify opportunities to gain better access for local produce generally to the market place. Involving local industry and the community in developing an alternative approach that moves the beef chain away from traditional processors and retail chains to more direct relationships with buyers and customers was one of the many ideas proposed to increase farm profitability, and enhance resilience to drought and other natural variability. Growing the grazing sector and exploration of a Noosa food brand more generally were major considerations.

PROJECT OUTLINE

The Country Noosa Forum received funding from the Queensland Government through the Noosa Council to undertake this project. The project focussed on the beef Supply chain analysis but also investigated the best ways to get local produce more generally to market. Watershed Australia was contracted to undertake the research and coordinate the project in collaboration with a reference group of key stakeholders. Many alternative agriculture approaches common in local food systems local food system globally (e.g. selling direct to retailers, farmers markets, farm gate sales and online ordering) are currently in their early phases of adoption in Noosa. The project adopted a sustainable value chain diagnostic methodology to investigate how to improve the flow of information and material along existing values chains and to assess opportunities for adding additional value to the shire-wide local food network through better relationships, enhanced infrastructure and communication through the supply chain. A review of previous research and case studies was conducted to assess the potential for shared distribution systems, food hubs, grower cooperatives and the like.

Objectives

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The investigation sought to answer some broad questions in regard to local food value chains including:

1. What are the factors influencing purchaser decisions (at business and consumer level) in local restaurants, farmers markets, second tier supermarkets and regional retail enterprises (e.g. fruit & vegetable shops, butchers)?
2. What are the important factors that can drive value generation in the local food supply chain?
3. Which specific food value chains offer the best opportunity for innovation to drive economic recovery from, and resilience to, drought?
4. What innovative/ clean technologies and sustainable production practices can be embedded in these chains to enhance value and reduce environmental impact?
5. What are the best methods for achieving enabling infrastructure, behaviours and actions within the chain that enhances the adoption of these technologies and practises?

Different 'behind the farm gate' production models (e.g. vealers, selling off yearlings, fattening) were evaluated. A limited benefit-cost analysis was conducted to compare the potential economic impact of increasing beef production from grazing lands based on several different beef production scenarios. Online and face to face consumer and grazier surveys (Appendix 1) and informal interviews with key produce and beef buyers were conducted to gain a better understanding of demand characteristics and existing opportunities and constraints for the growth of the local food system.

Local & Regional Food Movement

A new rural development paradigm has emerged over the last two decades. It is multifaceted in nature, connecting practices of landscape management, organic and sustainable farming, agro-tourism and integrated value-chain management. This rural development paradigm has seen significant growth in 're-localised' and 're-connected' modes of food provision around the developed world (Kneafsey et al. 2006). These trends are running contrary to the dominant agricultural model which has seen the increased efficiency of agricultural production based on technological and scientific advances provide cheap food to millions of consumers in the developed world. Proponents of the alternative agricultural movement point to the pollution of soil, water and atmosphere caused by industrial farming methods and the miserable lives endured by billions of animals in feedlots and battery farms as drivers for the need to change (Weis, 2007).

The descriptor 'alternative' is often used to signal oppositional or radical dimensions of the place-based food movement which can embody aspirations to 'reclaim' ownership of food production, 're-connect' consumers with producers through shorter supply chains, 'resist' global capitalism, solve problems of social exclusion and ecological degradation and restore access to healthy food as a human right rather than a commodity (Hassanein, 2003; Kneafsey et al. 2006, Venn et al., 2006; Watts et al., 2005).

The impetus for the movement toward local and regional food systems comes from several sources including:

- urban consumers motivated by a whole range of desires (for fresh, healthy, wholesome food), anxieties (about food origins and the conditions of its production) and care (for health of self and others, for local environments and economies) (Kneafsey et al., 2008);
- urbanisation and gentrification fuel demand for organic, seasonal and locally grown food made available through farmers' markets and Community Supported Agriculture schemes (CSAs). (Jarosz 2008);
- political concerns whereby 'the local' is seen as a form of 'resistance' to the forces of globalization and neo-liberalism by virtue of the construction of localised relationships of trust, regard and reciprocity (Allen et al., 2003; Hendrickson and Heffernan, 2002; Sage, 2003);
- economic drivers married to a desire to reconnect farmers with consumers in order for their work to be 'valued', to 'defend' traditional knowledge– practices, to preserve biodiversity and maintain lifestyles; and
- expressions of an 'ethic of care' for the people communities, soils, animals and ecosystems involved in food production (Cox et al., 2008; Wells and Gradwell, 2001).

This new paradigm frequently results in increased food production in peri-urban areas like Noosa. It has seen increased importance being placed on ecosystem services and social services produced as part of food production (Ashley & Maxwell, 2001; Lerner & Eakin, 2011; van der Ploeg et al., 2000). Within this context mid-scale food value chains present a promising business model that require public policies to effectively connect and support agricultural producers at a local scale as they endeavour to engage growing markets for differentiated, higher-value food products (Stevenson et al. 2011).

As part of this emerging global trend, regional networks of stakeholders in the local food movement are developing action plans that aim to connect, expand, and enhance information flow and business relationships along local and regional food value chains (Ethos Foundation, 2011; Flaccavento, 2009; Hawkesbury Harvest, 2004; Niagara Economic Development, 2009; Wisconsin Local Food Network, 2011; Wells & Waterman, 2011). Frequently this involves "buy local" campaigns such as Select Nova Scotia in which societal rather than purely economic benefits are highly valued by the consumer (Knight, 2013). Evidence suggests these systems strengthen and diversify the local economy, and increase sustainability and food security (Baker 2011).

Type of Programs Needed

If American trends are an indication there is significant potential for growth in direct-to consumer markets. In the U.S. this market segment has grown by more than 100 percent over 10 years in seven rural/urban interface (peri-urban) counties. This is likely a result of the farmers' better access to urban consumers in those counties (Oberholtzer et al., 2010). Counties with active rural leadership programs faired the best. There is an opportunity for U.S. style midscale food value chains to provide models of how farms, processing, distribution, and retail businesses can prosper by acting collectively in a local food system.

Localisation facilitates new value-chain interrelations with other farm enterprises and segments of the urban and peri-urban population that also enhance social cohesion. A particular focus in developed countries is on small- to midscale farm production, value adding, and the evolution of aggregation and distribution entities to achieve economies of scale as exemplified in Appendix 2a&b (Barham, 2012; Cheng & Seely, 2012; Mackenzie, et al., 2006; Metcalfe, 2012; Metcalfe & Widener, 2011). Increasingly, small- to midscale farms are implementing innovative forms of cost reduction and direct marketing, integrating environmental, land and water management into the farm, and producing high quality and region-specific products (Goodman, 2004; Sonnino & Marsden, 2006; van der Ploeg et al., 2000). Lev and Stevenson highlight "the importance of acting collectively at three distinct levels: horizontally among producers, vertically within food value chains, and horizontally across food value chains" (2011, p. 121). Importantly they recommend establishing learning networks across value chains to achieve these outcomes.

It is often presumed that smaller farms and food producers do not cause the same negative environmental or social impacts as industrial-scale farms as they tend to diversify their crops and agricultural techniques to make the most of their land. However, local food systems are no more likely to be sustainable or socially just than systems at other scales (Born & Purcell, 2006). Oberholtzer, Clancy, and Esseks consider that "the availability of technical assistance and funding programs that relate to direct marketing and alternative agricultural products be supported and better promoted at the local, state, and national levels, and that new programs be developed in areas currently lacking these programs" (2010, p. 71). Focusing investment and service delivery on cooperative industry and community initiatives will increase its impact (Stockwell et al. 2013). Actions should aim to enhance economic options for primary producers, diversify rural enterprise, and facilitate hybrid and alternate aggregation and distribution systems (Bills & Gross, 2005; Lerner & Eakin, 2011).

Consumer Trends and Preferences

There is a growing consumer trend to minimize the environmental footprint of food purchases and demonstrate social responsibility by purchasing local and regional foods (Carnell, 2011; Davey, 2008; Kneafsey, 2010; Parker, 2010; Socioeconomic Research and Intelligence Observatory, 2008). Assurance about the chain of custody and environmental credentials for all fresh produce has led to growth in the Australian market for healthier, more sustainable products (Sullivan, 2010). Health (e.g. organic), connectivity (e.g. with the producer), and convenience have been identified as behavioural consumer megadrivers that hold the key to the future for the Australian food industry (Davey, 2008). Eco labels such as the Marine Stewardship Certification is increasingly popular (Sullivan 2010). However, some argue there is a "green gap" between consumers' concern and their taking action. This is attributed both to price differential and confusion caused by unclear labelling and marketing (Sparks, 2011; Sullivan, 2010). While provenance is a very important driver of consumer choice, with the "Australian Made" symbol ranked as the most influential in the market, only 33 percent of consumers claim to buy local food and drinks regularly (Datamonitor, 2010; Paish, 2011). However, in a 2012 study 47% percent of the 2,274 adults polled in the online survey said that they would be willing to pay more for fruit, vegetables, meat and cheese produced near their homes. This was a larger share than those that said they would pay more for food without artificial ingredients (32 percent), meat made without antibiotics or hormones (30 percent) or 'handmade, small-batch or artisanal and specialty foods' (20 percent). Similarly Fieldman & Hamm (2015) found that unlike organic food, local food is not perceived as expensive.

Specific Trends in Meat Purchasing Behaviours

In 1960s mutton was the most popular source of red meat (52%) but problems such as world price, drought and wild dogs has seen a significant reduction in the sheep meat production. Over the last 25 years meat has moved up the food pyramid (i.e. health experts suggesting we should consume less red meat). The 'meat and three veg' standard meal of the 1970s and 1980s has gone by the wayside. This has affected horticulture as well with the potato, Australia's side dish of choice in 1984 (74%), currently only accounting for 39% of side dish choices. Today you will find superfoods including kale, blueberries and sweet potato as a standard and leaner meats being preferred in response to public health and consumer demand (Anon 2013).

A 2006 survey suggests quality and Australian grown are the two strongest attributes of meat that consumers are looking for (Table 1, Coleman & Toukhsati 2006). Other characteristics commonly associated with local food systems were also highly ranked including, lack of genetic modification, humane treatment, no artificial additives or preservatives and produced locally and free range. Different meats are associated with different consumer preferences. For example, intensification of meat chicken 'factory' farming has resulted in chicken being differentiated in the market based on value and popularity. (Figure 1).

TABLE 1

Table 13. Ranked means of importance of attributes for the purchase of a) Livestock products in general and b) Sheep and beef products.

	Mean
Quality	6.49
Produced in Australia	6.36
Appearance	6.04
Not genetically modified	6.00
Humane treatment	5.85
No artificial additives or preservatives	5.69
Produced locally	5.68
Free-range	5.68
No antibiotics	5.52
No hormones	5.48
Shelf life	5.45
Price	5.29
Size	4.69
Packaging	4.11
Brand	3.41

a) Livestock products in general

	Mean
Produced in Australia	6.32
Consistent quality	6.27
Appearance	6.09
Produced with concern for the environment	6.02
Leanness	5.95
Humane treatment	5.93
Free-range	5.91
No hormones/antibiotics	5.91
Nutrient rich	5.74
Value	5.65
Shelf life	5.60
Price per kilo of cut	5.49
Cut of lamb product	5.34
Size of piece/s	4.79
Packaging	4.40

b) Sheep and beef

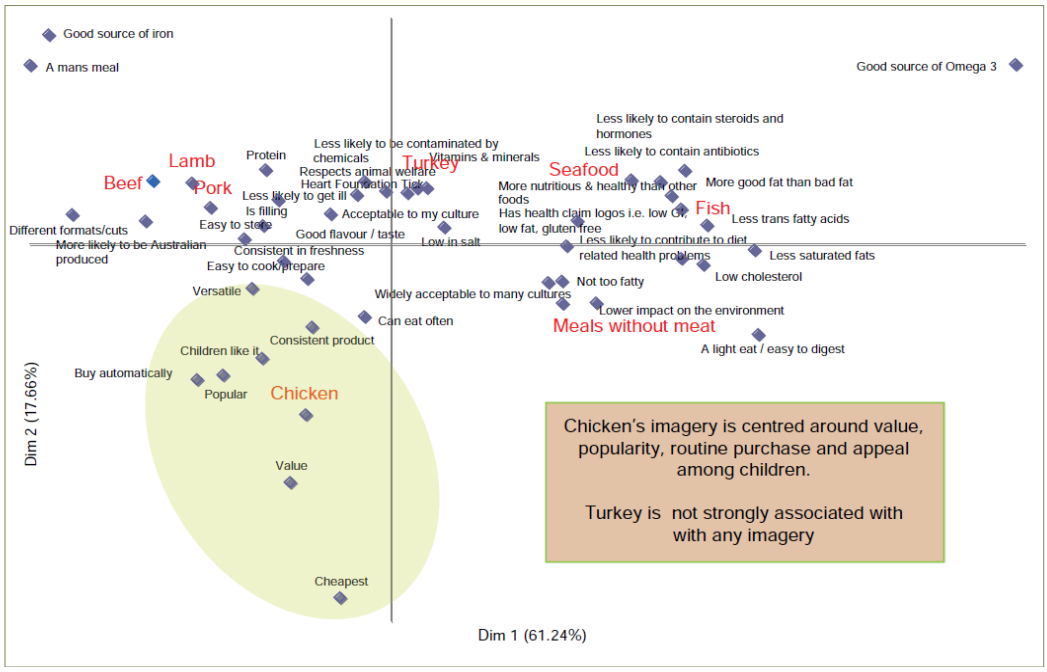

Figure 1: Comparison of different attributes valued by consumers for different types of meat

Accreditation and Certification Systems

As increased public attention is focussed on the downstream impacts of unsustainable agriculture and the need to measure the impact of government and industry funded programs aimed at improving management practices. Increased attention is therefore being paid to accreditation and benchmarking schemes that link agricultural practices to natural resource outcomes. In Queensland water quality issues afflicting the Great Barrier Reef and Moreton Bay have driven the development of these schemes. This has led to 'entry' level Best Management Practice (BMP) systems such as the Agforce Grazing BMP framework and in SEQ the FarmFLOW 1234 Grazing and ABCD Horticultural Classification framework (Appendix 3a&b). Benchmarking the impact of these practices on grazing lands is also an important step in a process of continuous improvement and innovation. The MLA Edge Network's Stocktake method is broadly accepted. Locally this has been adapted by the Mary River Catchment Coordination Association in their Grazing Land Condition Assessment (Appendix 3c). These systems offer simple checklists for either self-assessment or assessment in conjunction with a local sustainable agriculture adviser or extension officer and are considered important first steps in any program aiming to enhance the sustainability of food production.

The market however, is increasingly demanding higher levels of certification for products seeking entry into mainstream value chains to ensure they meet basic public health, and quality standards (e.g. Freshcare in horticulture). This is also becoming important for products seeking to differentiate themselves from less sustainable or ethical forms of production. Organic certification is well respected by consumers that seek foods free from artificial chemicals and additives. While it is time consuming and expensive to achieve this certification does provide premium returns through the chain. Concerns about animal welfare have driven recent activity to differentiate meat and eggs produced from free range production systems. The Cattle Council of Australia has developed the Pasture Fed Beef Certification system which allows producers who manage their system to ensure animals

- have open access to graze pasture their entire life
- have not been confined for the purposes of intensive feeding for production
- are fully traceable for their entire life via NLIS;
- are guaranteed to eat well, based on MSA; and if required; and
- are free from Hormone Growth Promotants (HGPs) and antibiotics;

to differentiate their product in the marketplace. The system however is geared to larger producers and would be relatively expensive for small scale producers to achieve compliance.

While in its relative infancy in Australia accreditation systems and sustainability labelling are common-place overseas (e.g. In UK products can have a Green Leaf logo for sustainability, Red Tractor logo for Animal welfare standards etc.). WWF is working with the large multi-national food service companies (e.g. Macdonalds) retailers (e.g. Walmart) and industry as part of the Global Roundtable on Sustainable Beef to develop agreed principles, criteria and means of verification. Similarly eco-labelling (geographic appellation or sustainability certification) built on UNESCO Man and the Biosphere Reserve recognition is growing in overseas markets. Most commonly these target the tourist market, but in Europe a number of Biosphere's have certified food products.

Business and marketing groups wishing to export need to be aware of the various standards. A good example of this in a regional food context is the Cape Grim Beef Model in Tasmania. This collective of graziers who share a standardised production system and marketing presence provides products which are certified by Meat Standards Australia, Tasmanian Government Natural Beef scheme (no hormone growth promotants), Non-GMO Project Verified, USDA Verified Process and is audited by the Global Animal Partnership in terms of animal welfare systems. Developing benchmarking, standards and certifications suited to local conditions is an important consideration for the growth of a local beef product in Noosa.

Sunshine Coast & SEQ Research

Wright's (2012) report on interviews with medium to large food manufacturers and Birch's (2012) consumer survey identified strong interest in increased local food and regional food supply. The most important drivers for local and regional food purchases by residents in the broader South East Queensland region include a desire to support local producers and retailers, the local community and the regional economy; and intrinsic qualities including freshness, reduced food miles, traceability and knowing the origin of local food and beverages (Birch, 2012). Quality, convenience, and customer service were more important for manufacturers (Wright, 2012). Further, a local produce distributor suggested demand from restaurants for local food was approximately twice as high as current supply levels (Lawrence & Cheung, 2011).

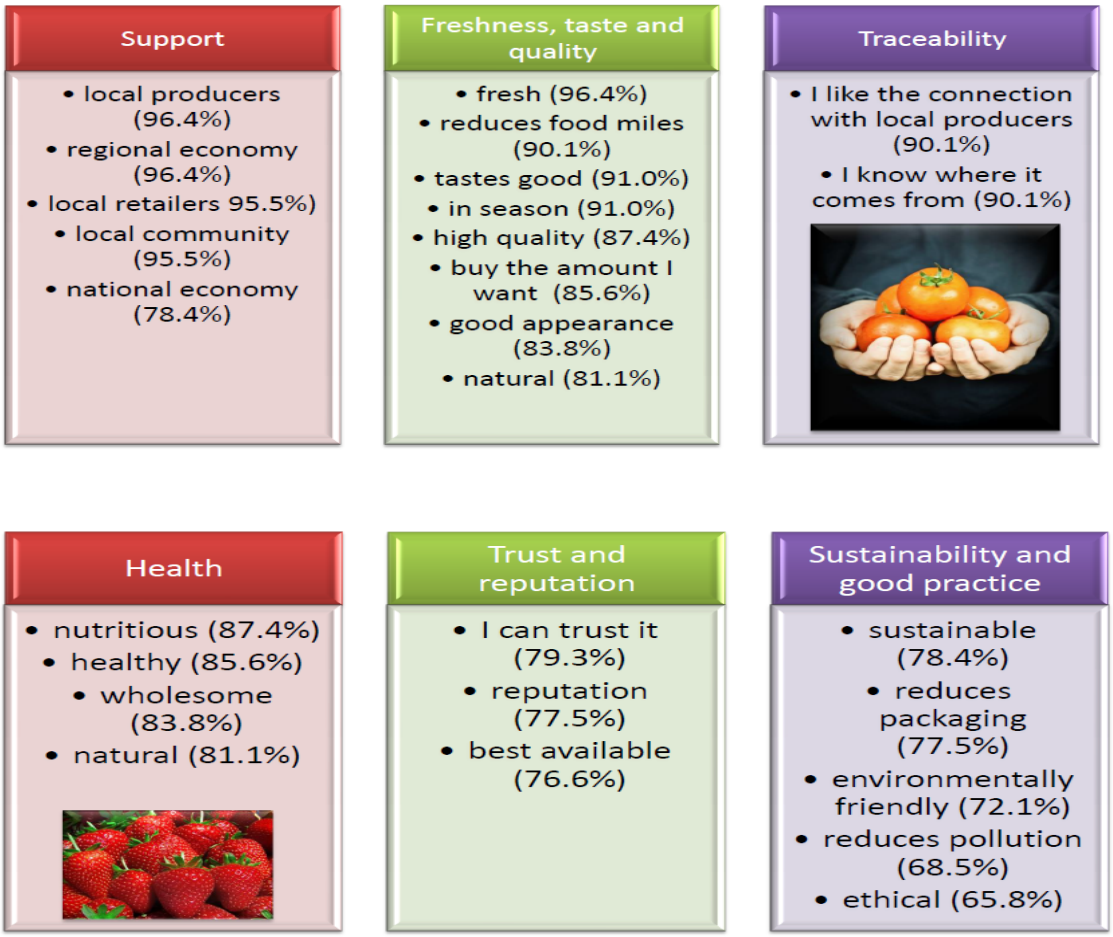

Figure 2. Key Drivers for Local Food Consumption in South East Queensland (Birch 2012)
Note: Results from people who buy local food more than infrequently

In 2006 almost one half (47 percent) of midscale Sunshine Coast farmers supported some form of branding; however, 44 percent of them considered that a regional brand would not be successful. National retailers were identified as the major stumbling blocks to regional branding. There was a higher level of support specifically for local branding, with 60 percent of midscale farmers interviewed agreeing that it was a good idea. This support, however, was similarly tempered by concerns about brand standards and substitution. Concerns were expressed that the reputation of a local brand could be tarnished by dumping of inferior produce if uniform standards of "best practice" were not set and enforced. It was also thought that local branding would be under threat from non-producers sourcing cheap inferior products and "passing them off" as local. Substitution of second-grade product from central capital city markets is perceived as a

widespread practice in farmers' markets in the region. A more recent study showed that the development of a local or regional brand was overwhelmingly supported by the micro- and small producers (85 percent), with an understanding that a brand would promote local food production as an industry attracting both local consumers and tourists (Stockwell 2012).

Smaller producers and food artisans viewed local or regional branding as a means to build a sense of connection and belonging to the Sunshine Coast. Branding was perceived as benefiting smaller producers and food artisans by connecting them to a larger collective brand that would enable them to talk about their produce as part of a regional food story. Birch's (2012) online survey of consumers of local food in the region supports producers' views about the need for improved marketing and branding. Both residents and tourists suggest the five most significant barriers to consumption of local food were:

- its lack of promotion;
- lack of information on where to find it;
- that it is not clearly branded as local;
- that it is not readily available; and
- that it is not well labelled.

The low level of marketing capacity within the micro- and small- sector was found to be a barrier to food systems development. When asked to describe their marketing strategy, 60 percent of the respondents reported they rely on word of mouth and repeat sales. This group did not proactively engage in marketing; rather they depend on the product "speaking for itself." Another 14 percent stated they did not have a marketing strategy. However, 30 respondents were involved in a business group external to their farm that shares aspects of crop production and marketing to maximize sales and profits. The need for coordination in local food supply chains, more effective marketing processes, and capacity-building for producers were frequently raised by respondents.

The provision of technical support and training was also a key issue for the micro- and small -scale producers and food artisans surveyed. A perception that changes in government priorities had led to a significant reduction in government agricultural extension was frequently raised as a major constraint to capacity throughout the value chain. Added to this were reports by many horticulturalists and dairy farmers, regardless of scale, that they are very time-poor and that day-to-day operations on-farm restrict their ability to attend training and extension activities. Despite these concerns, evaluation of five years of capacity-building activities using the FarmFLOW Framework specifically customized to peri-urban primary producers reveals high levels of participant satisfaction, knowledge-building, and behaviour change, all leading to the adoption of more sustainable production practices (Stockwell et al., 2012).

Transitioning midscale producers to more active involvement in local and regional supply chains is considered to be critical to meeting substantial increased demand. Interviews found that 41 percent of this sector already supplied some or all of their produce locally, but this was as much as they could supply under their current production and marketing arrangements. Most were in favour of a local distribution system but were sceptical as to how it might work. They were optimistic that most distribution challenges could be addressed by the facilitation of better relationships and collaboration between value-chain members rather than new infrastructure. There was strong support across all supply sectors surveyed for online information and an electronic trading and distribution system. The enthusiasm of producers and food processors for the development of an online data and a trading portal was matched by support in the food-service and manufacturing sectors (Wright, 2012). The food-service sector welcomed the concept, with more than 90 percent suggesting they would use a portal, while just over 70 percent of the manufacturing sector suggesting they would (Wright, 2012).

Sunshine Coast Farming Future Scenarios

In 2006 the majority (54 percent) of midscale producers, natural resource managers, and scientists participating in a Sunshine Coast/ Moreton Regional forum on best management practices suggested that there was less than a 15 percent likelihood that adopting a "business as usual" approach would achieve sustainable coexistence between agriculture, the community, and downstream fisheries in the region (Nicholls, Stockwell, & Layden, 2007). However, they were far more optimistic when considering a scenario in which an integrated area-wide sustainable agriculture extension program was delivered across the region in conjunction with incentives for the adoption of the best management practices that they had jointly agreed upon at the forum. Eighty-three percent of those participants considered that such a scenario had a greater than 60 percent chance of achieving a sustainable future for farmers and fisherman (Nicholls et al., 2007). Ongoing implementation of the FarmFLOW sustainable agriculture extension program as a result of this outcome led to nearly ¾ of all farmers making substantial improvements in the sustainability of their operations in the following four years.

A subsequent scenario planning process identified that there were two scenarios which the majority of farmers and rural residents perceived to be a desirable future state of affairs for agriculture in the region (Figure 3). Midscale Diversified Sub-tropical Agriculture, Cooperative Farming was the most favoured future scenario (39 percent) with the Small Scale Enviro-friendly and Organic Systems next, preferred by 33 percent of respondents. The least preferred scenarios were those envisaging residential development of cropping land, increased production from monoculture, and highly intensive horticultural and animal production based on eco technologies (e.g. Broiler Farms).

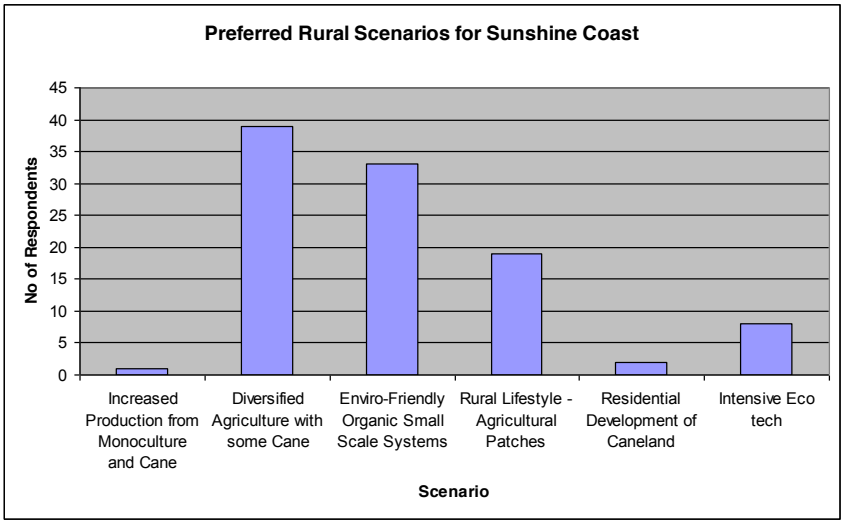

Figure 3 Preferred future agricultural scenarios for the Sunshine Coast (n=102)

In 2012 a symposium involving 84 key agri-food and tourism industry stakeholders, government officers, and academics reinforced the ongoing need for initiatives that build connections across the food value chain and between industry and government (Stockwell & Law, 2012). The highest priorities emerging from the symposium were to: (a) foster re-localisation of production and retention of agricultural land through changing planning laws and reducing red tape to allow farmers to undertake multifunctional farming; (b) improve the skill base of producers and knowledge of consumers; (c) enhance communication and trading along the food tourism value chain; and (d) develop an e-portal trading site to facilitate networking, collaboration, and distribution. To reduce barriers and increase participation in local and regional food value chains policy-makers, planners, and government service delivery need to intervene in ways that support rather than constrain local and regional food enterprises (Stockwell 2013).

RESULTS

Country Noosa conducted a mix of on-line and face to face surveys of local graziers and consumers. The results (detailed in Appendix 4a&b). are being used to inform an action plan to drive growth in the local/ regional food system in a way that meets consumer preferences and builds the capacity of local farmers and graziers. This report firstly provides a summary of key points and then briefly outlies the results of individual questions in the surveys.

Key Point Summary

Graziers

- About three-quarters of graziers surveyed were interested in pursuing options to connect to a local value chain built on respectful relationship and equitable share of earnings throughout the chain.
- The vast majority of current production meets the consumer preference of being pasture fed with minimal use of agricultural or veterinary chemicals
- Graziers (some are mixed enterprises) felt the absence of a local abattoir that ethically catered for beef, sheep, chickens etc. was the largest constraint to growing the local meat value chain

Consumers

- 60% of respondents were highly committed to buying local food
- 75% of respondents actually specifically buy local produce once or more times per week
- Supporting local producers was by far the most important reason for this practice followed by freshness, supporting the local community and reducing food miles
- There was very strong support for a local beef product with a strong preference for purely grass fed grazing systems
- Consumers would place high importance on a brand if it showed the product was accredited to meet animal welfare, organic, sustainable agriculture and grass fed beef standards
- Of least interest to consumers was a Noosa Biosphere accreditation, and this may reflect that most people thought that local food for them extended to include produce from the broader Sunshine Coast - Mary Valley region.
- Free range production was a touchstone issue with significant concern expressed about intensive, chicken, egg and pig production systems
- The most common place people said they would prefer to purchase local meat products from was the local butcher, followed by IGA Supermarkets. More respondents suggested they were more likely to buy direct from the farmer than from the big two supermarkets.

In general survey respondents reported they bought local food more often than a previous survey in South East Queensland and placed a higher level of importance on, clean, green and ethical production systems than a 2006 Australia wide survey.

Value Chain Purchasers

- Numerous opportunities were identified in interviews buyers of local fruit and vegetable and meat for wholesale and retail sale.
- Unmet demand coupled with spare capacity within local and regional processing enterprises and storage facilities run by people with a commitment to local food systems suggests there is ample opportunity for growth.
- Some graziers are already using on-line sales portal that aggregates products from a range of producers to give the consumer a broader selection within a virtual one-stop shop.

Grazier Survey Results

Location & Experience

Twenty-five graziers from the Eumundi to the Gympie postcode areas responded to the survey

The respondents represented a representative cross-section in terms of the relative level of experience with a third of surveys completed by graziers with more than 20 years' experience.

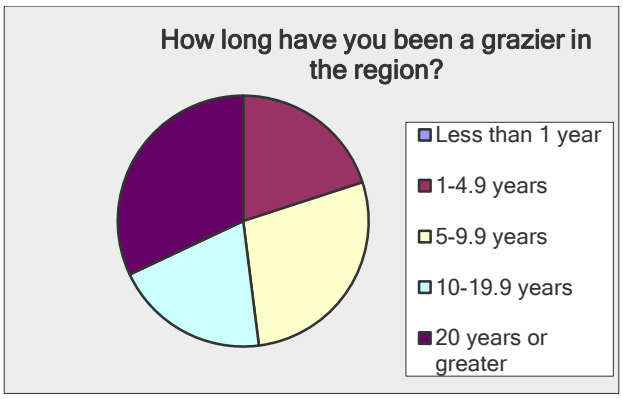

Figure 4

Tenure

While nine out of ten respondents grazed properties that they own, there was evidence of diversification in the local industry. A number of graziers also agist, lease or have some form of share farming arrangement. This is an indication of adaptation to the peri-urban context of production.

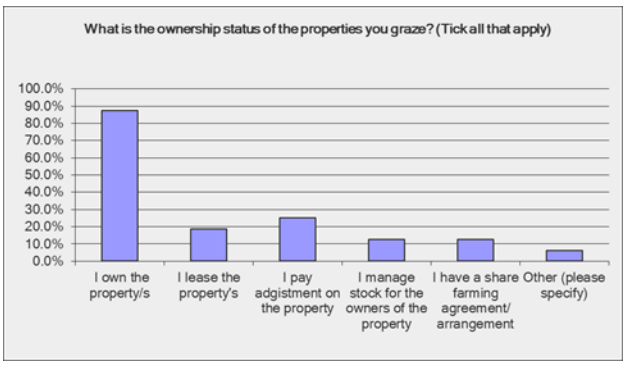

Figure 5

Scale of Production

In excess of 90% of respondents were operating at a scale that would under normal market conditions not be considered commercial. Approximately one third however would be considered at a sub-commercial scale of production that would provide a reasonable income for a property. About half of respondents would be classified as part-time producers that would require another source of income to reach a median income level. A further 15% were small landholders where grazing is a hobby.

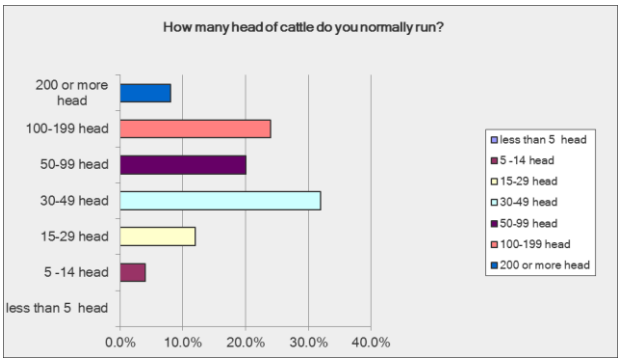

Figure 6

Area of Production

There was a strong correlation between grazing area and the stock carried with median values suggesting stocking rates were in the order of expected carrying capacity if grazing land was in good condition. The median size of the grazing enterprise was in the order of 50-99hs.

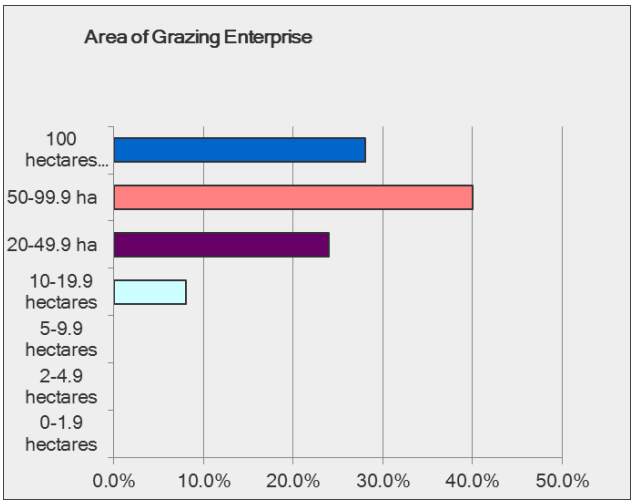

Figure 7

Transport to Market

About half of respondents use a livestock carrier to take cattle to the point of sale, with a further 38% who use a mix of their own vehicles and carriers. Sixteen percent of producers are self-reliant in terms of transporting cattle and meat.

Current Grazing Practices

One half of respondents were grazing consistent with the requirements for pasture-fed meat accreditation, with a further 18% still being mainly pasture fed with some supplements. Organic or biodynamic producers represented 12% of respondents. This shows a clear local capacity to produce products meeting consumer preferences

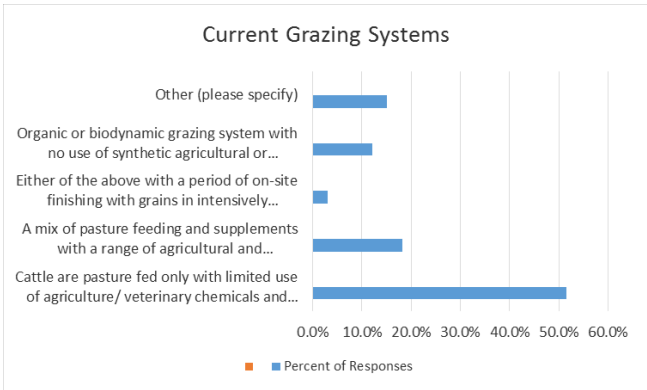

Figure 8

Current Selling Practices

The respondents had a diverse range of practices in terms of to whom they sold their cattle. The Gympie Saleyards and direct to an abattoir being the most common (about one quarter of respondents in each category). Interestingly 25% of respondents sold to JBS Dinmore in Brisbane, more than those selling direct to Nolans Abattoir in Gympie. However, many of the cattle sold at the Gympie Saleyards are likely to make their way through to Nolans Feedlot and then Abattoir. An indication of the embryonic local food system is the 13% of graziers who contract slaughter and sell their meat products direct.

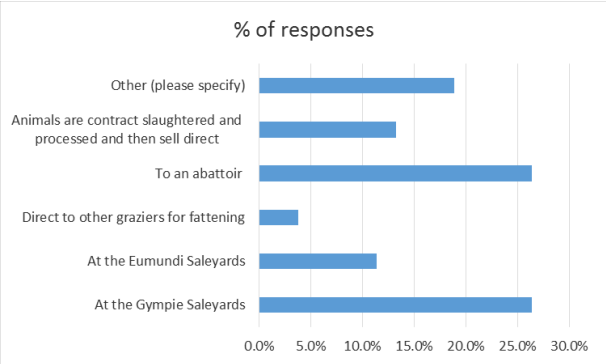

Figure 9

Expansion Aspirations

There was a majority of producer who may be interested in expansion of conditions were right with 45% definitely wanting to. More efficient production (pasture production and herd improvement) as well as producing more cattle for the local market where options being considered.

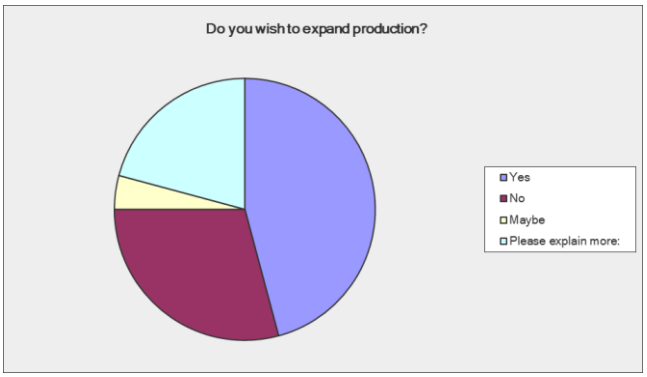

Figure 10

Constraints to Expansion

There were a variety of constraints that graziers identified as inhibiting their ability to expand. Limitations on land availability (22%) and capital to effect property improvements (20%) were the highest ranking issues. Time constraints was next most common, followed by concerns about Council regulations. These constraints largely relate to enterprises that are seeking to diversify and intensify into mixed animal farming systems such as "Regenerative farming" who trigger costly Council and Environment development approvals as intensive livestock enterprises.

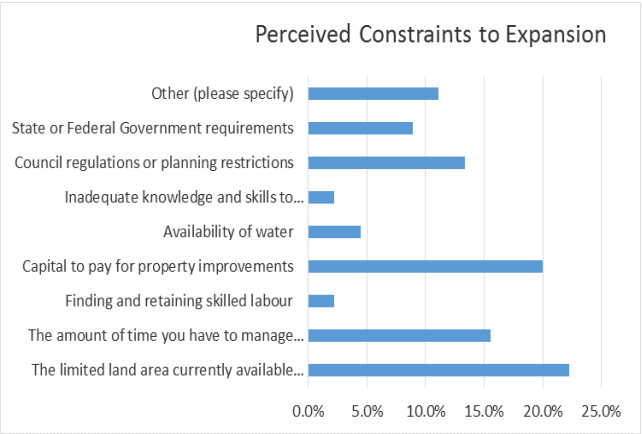

Figure 11

Interest in Local/Regional Food System

Almost three-quarters (72%) of all respondents were interested in investigating opportunities to connect to a local or regional food system. There appears to be clear grazier willingness to pursue a more values-based supply chain approach in the region with only 2 of the respondents not interested. One direct marketer commented that he was "*currently working on developing a charter so that markets can be in involved in creating true genuine known provenance food marketing.*"

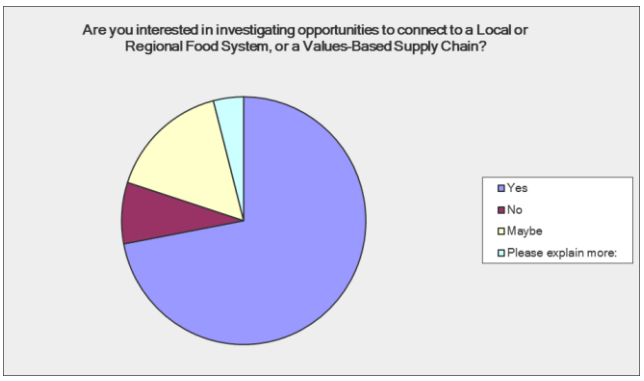

Figure 12

Factors Influencing Decision to go Local

Current constraints in the value chain were the predominant factors of concern to graziers wishing to link to a local food system. The absence of a local small kill (multi species) abattoir and greater access to local boning, processing, butchering and storage facilities are of most concern. Receiving a better price for product and better marketing and promotion were also highly ranked factors.

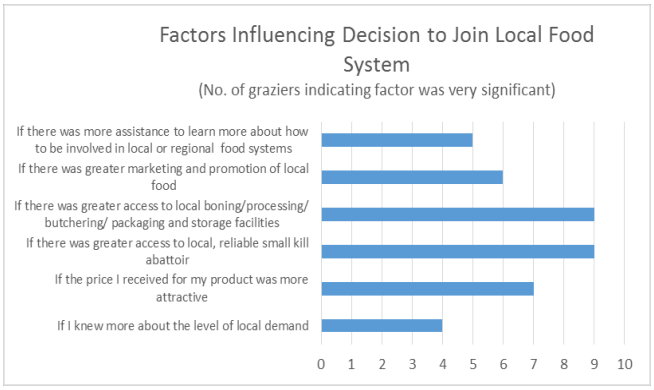

Figure 13

Perceived Important Brand Attributes

Producers perceive that branding their product as product of the Sunshine Coast / Mary Valley Region is most important. This reflects a similar consumer priority or regional branding. Farmers thought health benefits was next most important, but this is lower down the scale in the consumer survey. Lower food miles was ranked third with organic and chemical free being next most significant. Graziers rated animal welfare and sustainable agriculture accreditation slightly lower than did consumers.

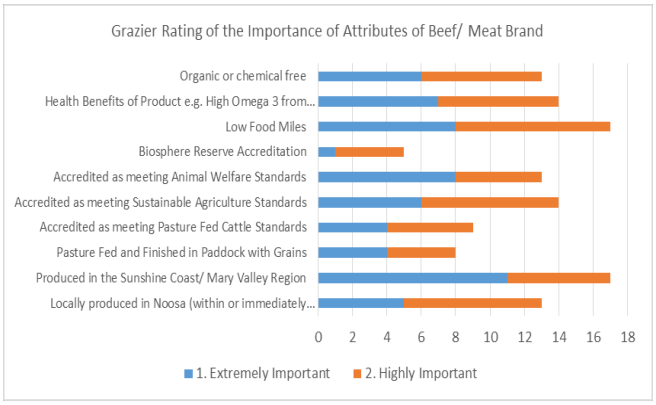

Figure 14

Training, Benchmarking & Accreditation

With 40% of respondents having never participated in any form of training, benchmarking or accreditation there is a clear indication of the need for further capacity building. The most common activity was grazing land condition assessment (20%) of respondents and this is a good place to start to identify other training needs. This results a sizeable challenge in gaining buy in to an accredited brand standard.

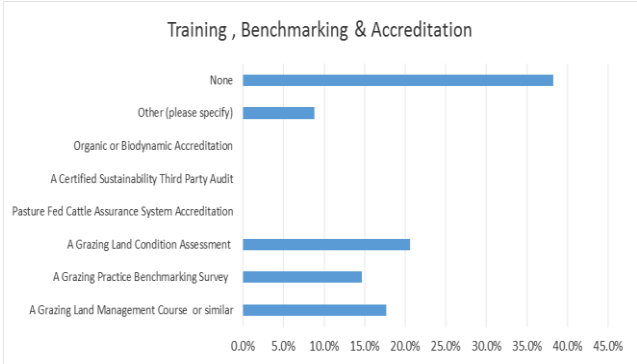

Figure 15

Current Problems along Value Chain

A number of respondents reported facing similar problems and challenges in transporting, slaughtering, processing or distributing your animals and other products?

In rank order they were:

- Lack of a local slaughtering facility that was trusted to do small contract kills, ethically and with a clear line of sight in from delivery to butcher. This included the inability not to have animals slaughtered under "Halal" accreditation in one local abattoir and slaughtering of pigs, sheep and goats (9 respondents)
- Difficulty in finding butchers who will buy whole carcasses (& nose to tail distribution) - knowing the available paths to direct meat to local butchers (5 respondents)
- Concern that regional farmers markets have inadequate standards, transparency of rules/ charter and therefore direct selling producers have to compete with wholesalers (3 respondents).
- Rigid prices at point of sale and no recognition for grass fed status in price structure (2 responses)
- Marketing
- Various bureaucratic challenges and expenses e.g. from Safe Food Queensland.

Desired Forms of Assistance

Graziers generally identified assistance to address some of the problems and challenges identified elsewhere in the survey. Respondents would like to receive help grow their business, make it more profitable, sustainable and resilient to market fluctuations and drought in the following ways:

- Capacity Building – including pasture management, pasture improvement, cattle nutrition, herd improvement, how to comply with Vegetation Management Act. (6 respondents)
- A reliable "bird-to-beast" abattoir and linked butchery and cold storage, servicing smaller producers and focussed on animal welfare (6 respondents)
- Red Tape Reduction, or advocacy to promote more flexible regulation of small scale industry e.g. local government Planning fees (4 respondents)
- Brokering Co-operative arrangements including: purchasing to reduce costs - fuel, seed etc. Sharing, labour, equipment resources to enable property improvement and group farming arrangements (4 respondents)
- Marketing and distribution, creating awareness of local product, local branding (4 respondents)
- Community-based, non-profit, real farmers markets showcasing locally grown product with integrity (2 Respondents)
- Identify mechanisms to reduce price volatility of cattle.

Recommended Strategies & Actions

The desired strategies and actions graziers think should be initiated to help the local/regional grazing industry grow and thrive largely reflected the assistance they desired and the problems they identified. They included:

- Initiate an eat and shop local campaign and consumer education
- Implement an education program for novice land holders, run seminars etc. on topics such as supply chain management to improve return, overcoming nutrition problems, pasture and land management, genetics, sustainable production, financial management
- Review systems and regulations to allow small scale operations to be competitive
- Facilitate connections between agricultural landholders with graziers to allow more efficient rotational grazing between adjacent properties
- Develop a cooperative marketing / promotional campaign
- Providing on-farm advisers and support for farmer groups and networking
- Increase weed and feral animal management programs.

Consumer Survey Results

Demographics

The vast majority of the 112 respondents lived between Eumundi and Gympie. Two thirds of these were women. The median age group was 50-59 with 81.55 over the age of 40. Half of respondents held a bachelor degree or higher with 86% having some form of post school qualification. These characteristics are consistent with previous research on the most regular purchasers of local food.

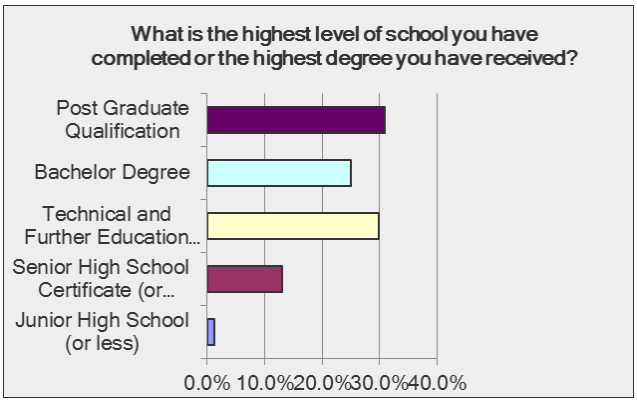

Figure 16

Commitment to Local Food

Distributing the survey through networks of key local food stakeholder resulted in nearly two-thirds of respondents reporting high or very levels of commitment toward purchasing local food. While this can't be taken to be an indication of broader community values, it does mean the other survey results will clearly show the drivers for local food purchasing behaviours. While less passionate, random surveys in Pomona and Cooroy revealed that 65% of those interview were highly committed to localism.

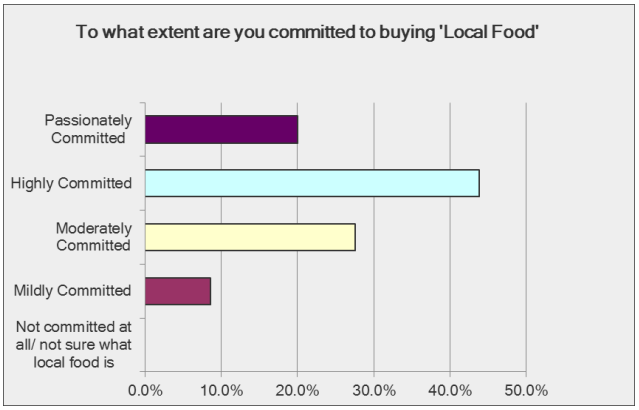

Figure 17

Frequency of Purchase

With 73% of respondents actively purchasing local food once a week or more frequently the results indicate a significantly higher level of adoption than similar surveys in SEQ in 2012. In the earlier work only 30% of regional respondents and 40% of Sunshine Coast respondents had a similar frequency of local food purchasing. This is likely to be a result of both sampling methodology and an increasing consumer preference for local food.

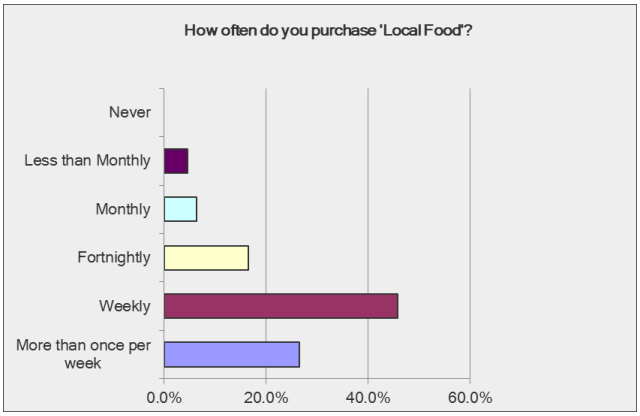

Figure 18

Consumer Drivers

Providing support to local farmers was the highest ranked reason why respondents preferred to buy local produced food. Freshness, supporting the local economy and reducing food miles were also important considerations. These ranking are generally consistent with the regional survey, except that the regional economy scored more highly in the 2012 research.

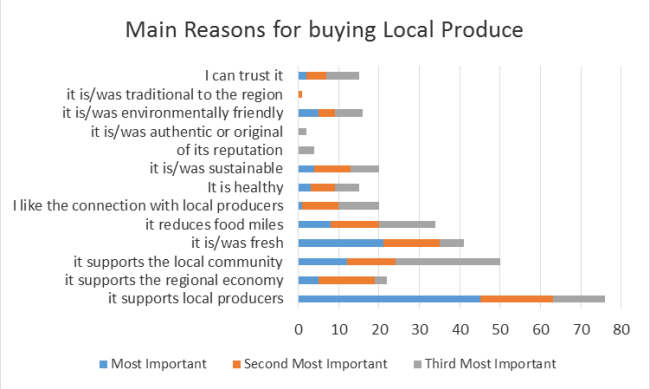

Figure 19

Constraining Factors

Lack of availability of local produce, or inability to identify local produce because of inadequate labelling were the most frequently cited factors that prevent or constrain respondents desired level of local fodd purchases. The price of the product was the thrid ranked factor. Restricted budgets and price was frequently mentioned as factors that moderate behaviour compared to purchasing prefence in the on-street surveys in Cooroy and Pomona.

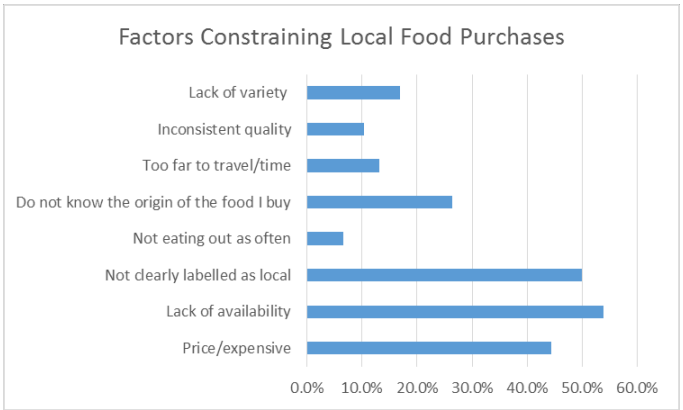

Figure 20

Interest in Local Beef

With 70% of respondents indicating they would be intersted in buying alocla beef product there appears to be signifcant oportunities for growth in this sector. Vegetarians and people who produce and eat their own beef were the only respondents who said they defineitly would not buy local beef.

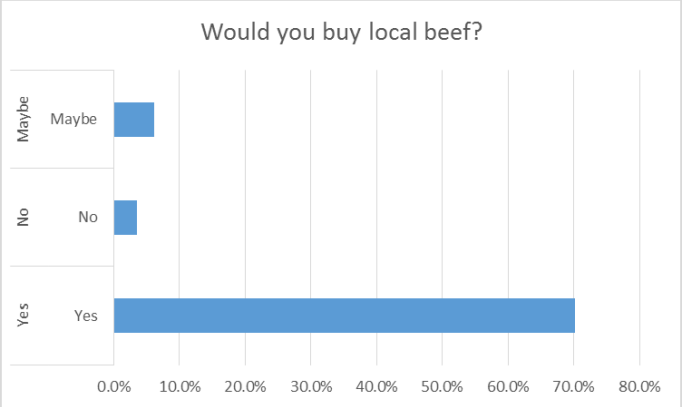

Figure 21

Willingness to Pay

Asking consumers how much they are willing to pay is perhaps one of the more unreliable survey questions. However, if you look at the result in the understanding that respondents are more likely to overstate compared to their real behaviour it gives a reasonable indication that consumers are prepared to pay in the order of 15% more (median value) for local/regionally produced meat. While slightly lower this premium could also apply to a branded product that was accredited in regard to animal welfare and sustainable agriculture. Willingness to pay reduced if these attributes weren't certified.

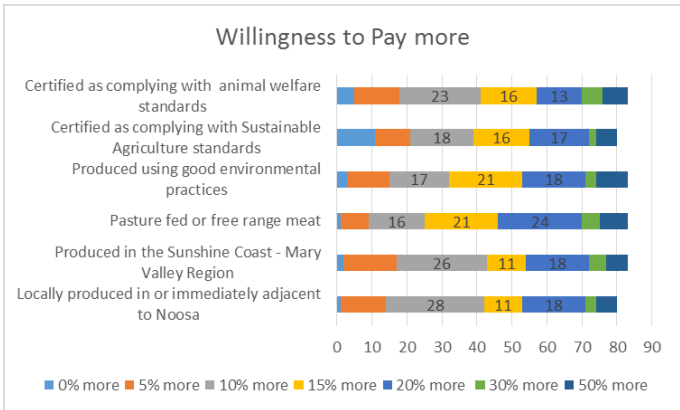

Figure 22

Likelihood of Future Purchase

A strong preference for grass fed beef was evident when consumers were asked about specific types of beef they would likely buy in the future. More people were likely to buy beef from Angus on an occasional or regular basis than Wagyu. In the face to face interviews respondents were asked to indicate their preference between products produced by a feedlot, compared to a product finished with some grains in the paddock. Over 95% preferred the latter.

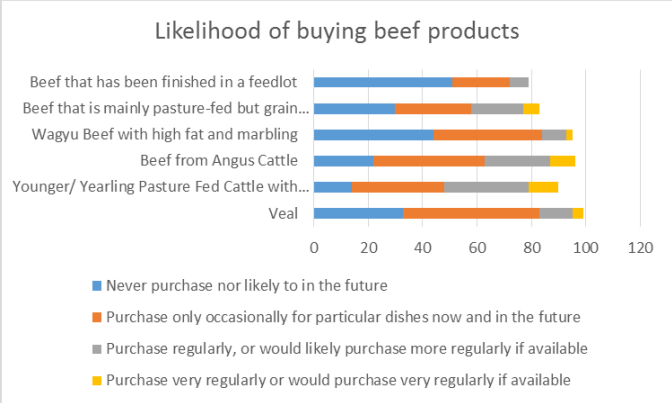

Figure 23

Retail Outlet Choice

One of the more surprising results of the survey was that when asked to rank how likely they were to purchase local beef (or other meat product) from various retail outlets that the large supermarkets Coles and Woolworths came fourth on the list. Local butcher shops were the first option for the majority fo respondents. And while the face to face interviews conducted outside of two hinterland IGAs represented less than a quarter of respondents they ranked second overall. Perhaps more importantly for smaller direct marketing graziers a preference to buying from the farm gate, on-line direct ranked higher than the big two. This result however, is consistent with a range of consumer values that drive local food system. A preference for connection with both the producer and the people selling you the product, a preference for private small business over large corporations and a desire to receive personalised service.

TABLE 2

Preferred Retail Outlet for Local Beef	Rank
Local Butcher or Specialty Shop	1
Small-Medium Supermarket (e.g. IGA)	2
Farm Shop or Farmgate	3
Large Supermarket (e.g. Coles , Woolworths)	4
Farmer's Market / Week-end Market	5
Local cooperative	6
Home delivery or refrigerated van sale	7
Internet - Online Portal (e.g. buying box quantities or sides of beef online)	8
Restaurant, Club or Cafe'	9

Concern Regarding the Treatment of Animals

Very high levels of concern were expressed in regard to the intensive meat and egg production systems that currently produce the vast majority of product available for purchase. Awareness of the ethics underpinning free range egg production system are now widely understood and have achieved a significant change of behaviour in the mass market. There is a clear preference for free range systems and while not asked overtly this is likely to underpin the strong preference for grass fed beef. Significantly the level of concern expressed in the sample is significantly higher than that expressed to a similar question in a 2006 national survey by Monash University for MLA. This is likely to be a result of an underlying general community trend and the particular demographic attracted to complete this survey.

TABLE 3

Animal System	Median Score	Rank
Poultry housed in cages	very concerned	1
Artificial rearing of calves in pens	very concerned	2
Intensive poultry (chicken meat) farming	very concerned	2
Intensive egg farming	very concerned	4
Intensive pig farming	very concerned	5
Pigs raised in pens (i.e. smaller areas within sheds)	very concerned	6
Care of circus animals	concerned	7
Use of animals in indoor farming	concerned	8
Loss of young animals from livestock production systems	concerned	8
Care of marine park animals	very concerned	10
Livestock transported overseas	very concerned	10
Care of zoo animals	very concerned	11
Free range egg farming	mildly	12
Free range poultry (chicken meat) farming	mildly	13
Free range pig farming	neither	14

Importance of Attributes of Food Produced from Animals

The above change/differences in preferences and attitudes are more clearly evident when respondents were asked about the importance of certain attributes were in terms of their choice of foods produced by and from animals. This shows a higher level of importance placed on attributes of free-range, no-antibiotics and no hormones compared to the 2006 Monash University study. The other interesting insight from this question show that attributes for livestock products focused on clean, green and humane aspects of food production such as dimension included the 'no hormones', 'antibiotics' the 'not genetically modified', a 'free-range', the 'humane treatment', being 'produced in Australia', and 'quality' where in fact more important than products produced locally. While this may at first, seem a contradiction to results to earlier question, it is likely when answering those question that respondents were including a bundle of assumptions into their decision about what attributes 'local food' generally embodies. While this may have been an implicit assumption it is also an important factor when considering whether to create an appellation of brand standards for local produce.

TABLE 4

Attribute	Median Score	Rank Noosa 2015	Rank Aust. 2006
Product of Australia	very important	1	2
Free-range method of production	very important	2	8
Contains no antibiotics	very important	3	9
Contains no hormones	very important	4	10
Quality	very important	4	1
Produced with the humane treatment of animals	very important	4	5
Contains no artificial additives or preservatives	very important	7	6
Is not genetically modified	very important	8	4
Produced locally	important	9	7
Appearance	mildly important	10	3
Shelf life	mildly important	11	11
Price	mildly important	12	12
Packaging	neither	13	14
Size	neither	14	13
Brand	neither	15	15

Results of Fruit & Vegetable Buyer Interviews

Face-to-face and phone interviews conducted with retail and wholesale buyer of fresh produce revealed numerous opportunities for local growers to sell quality product direct. Both Pardons Fruit Market (Noosa Junction) and Tewantin Fruit Plaza source as much local produce as they can to meet customer needs. These businesses have developed long-standing relationships with local and regional farmers and are open to new suppliers. Value chain ordering systems are simple generally via phone or text message. Regular supply to maintain a level of freshness superior to products that have gone to central markets and then via a distribution centre to a supermarket shelf is a key point of difference.

Larger buyers interested in receiving more product direct from farmers include the Cooroy and Pomona IGA and Suncoast Fresh. Suncoast Fresh is a provedore servicing over 300 restaurant which grew out of Belmondos in Noosa. It is based on a philosophy of providing locally grown fruit and vegetables but does supplement from central markets wot meet restaurant needs. It now has facilities in Noosa, Brisbane and Byron Bay and is underpinned by a desire to provide quality regional produce. They represent a lower stress option for producers wanting to see their product in local eateries. IGA is a large turnover business and is willing to enter into arrangements with any producer with an ABN who can supply product of adequate quality and quantity. For organic and chemical free (i.e. not certified) growers home delivery service Freshbox has a large facility in Palmview and is very keen to source more locally grown product.

Results of Retail Meat Buyers Interviews

TABLE 5
Summary of Meat Buyer Interviews

Enterprise Name & Location	Market Niche (if any)	Source & Volume of Beef	Value to Chain	Supply Issues & Opportunities
Noosaville Meat Market (Noosaville Industrial Estate)	Currently catering for budget market but also doing boning, cryovac packaging, smoking, , value-adding, labelling and boxing for producers	Source Bodies from Nolans Currently low volume, (just taken business back over recently) Sources free range chickens from Golden Cockerel	Potential to hang up to 10 beasts plus large boning room. Beef boner by trade, 25 years' experience (La Boucherie)	Potential key facility for growing local beef. Producer can give his number to Nolan's and bodies and meat analysis will be sent to him for boning etc.
Noosa Country Meats (Noosa Junction)	Stocks a lot of product branded as "grass fed". Has preference for 'softer' European breeds, bodies between 200-220kg.	Low-medium turnover of bodies and boxes. Currently sourcing through AWN from southern Australia (Victoria and Tasmania) Sources free range chickens from Lilydale	High exposure to target market for local food. i.e. Well educated, older women.	Comes from a grazing background and is interested in the concept of local beef product if it can meet his desired meat quality**.**
Sunrise Butchery (Sunrise Beach)	Exclusively organic beef, free range pork and chicken.	Sources Boxed Beef exclusively from Obe Organics, Rhodavale Pork and Moya Free range chicken. Presume fairly low turnover, but people travel to get organic product.	Was pretty happy with his supplier, but may be tempted by a local organic product. Also stocks local artisanal condiments etc.	Will likely preference certified organic product.
Tewantin Country Meats (Noosaville Industrial Estate)	General butchery, with a large cool room with a range of cryovac product he markets as "cattleman's choice". This tends to be better quality grass fed beef cuts. He has a large wholesale smallgoods component supplying numerous IGAs across the state.	Currently sourcing 5-6 bodies through buyer "Johnny Warren" and through Nolan's to them. Currently needs to supplement with boxes but could double bodies on site. Stocks hormone free, but not free range chicken.	Larger turnover enterprise that has a large staff, including boners and is chasing supply. Is keen to establish direct relationships to ensure continuity of supply at the right price.	Currently demand is pushing prices to a point where consumer behaviour is driving the need to change packaged products to smaller size to fit within budget. Has had some long-standing pork suppliers cherry pick better prices and he is keen to establish loyal relationships.

Enterprise Name & Location	Market Niche (if any)	Source & Volume of Beef	Value to Chain	Supply Issues & Opportunities
Cooroy Butchery (Maple St Cooroy0	Traditional butchery with focused mainly on steers 1-3 years of age. Mainly grass fed, but can use grain creepers if needed to finish. Product not branded, but large sign re local farm source.	All beef product sourced from the family farm at Woondum. Moya free range chickens in stock.	Vertically integrated family enterprise unlikely to be receptive to other producers at this stage.	Nothing raised.
Wright Cut Meats Maple Lane Cooroy)	Enterprise is based on local food system thinking. Plenty of branded product focussed on local, minimum chemicals, grass fed beef. Stories of the farms displayed.	Sourced from a number of local producers with their individual stories on display. Approximately 3-4 bodies per week. Also stocks free-range pork and Moya chicken.	Strongly aligned to local food movement, Business is growing and has put on additional staff. Also does wholesale boning, processing and boxing including for Rorganics.	Has good relationships with graziers who supply him, but difficulty in always getting free-range chickens. Has just employed a experienced local butcher so can grow wholesale side of business.

Table 5 continued.

Grazing Land Management Systems Review

There are a portfolio of markets that a grazier can target depending on their land condition, herd composition, management prowess and desired level of management input. For example, the vealer market system is the closest enterprise one can get to dairy farming, without actually milking the cows twice a day. It requires a high level of management and good quality pastures. The two market options which are the least labour intensive and most time flexible for beef producers are finishing cull cows, and backgrounding steers for the feedlot trade. There is a maxim in the industry that more money can be made from buying store animals at a low price (c/ kg), and selling the finished animals at a high price (c/ kg), than can be made from producing weight gains (kg/ head) on those animals.

Increased return (c/ kg) can be achieved by value-adding based on targeting one or more of the 3 trade grid components:

- dentition (2 tooth and above);
- Dressed weight (DWt) - 250kg/ 250 to 280kg/ 300+kg); and
- P8 leanness (>33mm too fat/ <7mm too lean),

Regional processors have their own carcass specification grids which are available on the internet. For example JBS Dinmore has grids for Grass-fed females, Grass-fed males, Grain-fed Jap Ox & Trade steers & heifers, MSA Grass-fed Trade & Jap Ox, and MSA Grain-fed Trade & Jap Ox.

Table 6 summarises this portfolio.

TABLE 6
Grazing Management Systems Summary

Specific Market Characteristics	Land Condition & grazing system requirements	Herd Characteristics & considerations	Management Considerations
Butcher's Calves - Max. 120kg DWt (above this called splitters & less return) - Veal market - Least efficient - Least return	Will tolerate a variety of Land condition, but if the target is a quality veal market (i.e. meeting MSA standards) then breeders will require A Class Land or supplements	Need maintain a high number of breeders which will make the operation more vulnerable adverse weather/ market conditions	Lowest level of management input
Cull Cows - Mainly export to US hamburger meat trade - Also sold to grow out for non-breeding heifers	Average pasture - Class C+ as a minimum	Base cull on pregnancy test if negative after one (or at most) two seasons then cull. Some producers may buy cull cows to grow out.	Moderate level of management input and knowledge of herd etc.
Vealers - domestic trade steers and heifers less than 18 months with milk teeth - 150-200kg DWt - With strict MSA standards to meet - Potential to sell to butcher or feedlot.	Seasonal calved, sold straight off good milking capacity cows at 6 to 8 months old, or weaners put on best A Class paddocks and finished either with grains e.g. creepers, or on paddocks improved by the application of nitrogen.	Generally need to be cross bred – preferable long body with European bloodlines. Weaners are the top progeny from the first 10%-20% of calves each year. Higher returns the lower the dentition.	Highest level of management to produce weaner within the weight range and meeting MSA specs within the age limit. Need to have kept constant records of breeders to identify which produce best calves.
Weaner Steers & Heifers - approx. 300 to 350 kg LWt - could e.g. be grown out cull cows - sold to feedlot for finishing	Reasonably flexible management systems and pasture condition. Condition of cull cows at time of purchase will be a factor. Avoids the need to finish on improved pasture or grains.	Not specific	Moderate level of management, can suit graziers who want to adopt a more relaxed management regime.
Jap Ox - Stock is bought in from saleyards at around 250 kg Live weight - Sold by 30mths old in a weight range of 300-400 kg DWt. - target market is the Japanese Oxen class, for export or to restaurants	Pastures will need to be in Class A or B condition to achieve the necessary weight gain. Product is usually fully grass fed with minimal chemical inputs. Last 6 months at low stocking rate on improved pasture e.g. Late summer/ autumn Nitrogen applications to accelerate weight gains before June	If not buying in weaner stock then herd management during dry times may be difficult considering the altered ration between breeders and saleable stock.	Moderate level of management, can suit graziers who want to adopt a more relaxed management regime. Rarely attempted in coastal grazing systems.

There are a range of specialist local market opportunities for graziers that require consideration in grazing management systems. Some local Gympie Butchers, for example, prefer a slightly larger well-muscled carcass e.g. around 240kg DWt. To meet this demand local producers supply direct (processed at Nolans), after weaning and finishing them in a B+/ A condition pasture paddock on grain at about 14 or 15 months old. Some Traders, such as Johnny Warren, buy this same class of animal at the Gympie Saleyards for Sunshine Coast Butchers (again processed at Nolans). Other butchers prefer a larger grass-fed carcass at 300kg DWt or above/ no milk teeth, for their specialised grass-fed/ low chemical use market requirements. Local producers produce these off improved pastures and supply these direct (can be processed at Biggenden). Choice of breed is also a consideration all butchers tend to favour European breeds over tick resistant ones. Careful cross-breeding (e.g. European with long body breeds) is required to achieve required meat quality and weight gain to meet certain markets.

In normal seasons, seasonal calving should start in August and be finished by the end of October. However, the first step in establishing this system is to have all calves on the ground before Christmas, and then progress to finish calving by the end of November, and then by the end of October. First calf heifers are often mated 1 month earlier in November, so as to buy them some extra time to get them in calf. However, the best chance of success is really the optimum mating weight (280 to 320 kg LWt depending on breed), rather than more time spent with the bull. Likewise it is best to start with the bulls in the paddock for 4 months, and then reduce it to 3 months (under normal seasonal conditions), when the desired seasonal calving regime has been achieved

Benefit Cost Analysis – Future Grazing Scenarios

A Benefit Cost Analysis (BCA) was conducted to identify the relative economic potential of different grazing development scenarios in Noosa Shire. Scenarios are not predictions of what will happen, but are compiled to represent futures that could happen based on current trends and trajectories. For the purposes of comparison four different scenarios were modelled.

<u>Scenarios</u>

Traditional status quo **–** continue current practices -raise cows on own property sell cull cows and weaners at saleyards, to abattoir or to other grazier for fattening (average grazing area 22ha)

Small cooperative marketing and local selling **–** 3-4 small scale producers working together to share local marketing online, farmers market etc informal agreements on production and product standards (average grazing area per group 100ha). An additional $200/ha /annum was factored in for increased return from direct sales.

Local Landscape Collaboration – A group of adjoining landholders pool land and water resources to make the best use of grazing and agro-forestry operations, potential for specialisation I.e. one owner managing cows, the other plantation private forestry etc. This scenario was modelled including one intensive mixed species 'regenerative farm' (40 ha with double stocking rate) within the landscape (average area 250 ha).

Managed Estate/ share farming enterprise model – a single manager/ running cattle across a range of properties featuring a mix of ownership, leasing and agistment options (average grazing area per enterprise 500ha). Increased managed competency is factored into this scenario (current + 0.2AE/ha).

The analysis also had variations of these scenarios to estimate the economic impact of maintaining existing levels of farmer engagement and land management compared to what may be achieved if a more rigorous best management practice extension program e.g. establishing action learning grazier groups (see FarmFLOW Approach – Appendix 5) together with modest investment in pasture improvement.

Growth Options

Considering the uncertainty in regard to the likely future growth of the grazing industry the scenarios were assessed for three different growth options.

1. Conservative – Grazing on 9300 ha mapped as Class Land (an additional 100ha)
2. Moderate - 50% increase on current grazed land – 12400 ha
3. High – 100% increase on current grazed land – 16,600 ha

A 10 year time frame was adopted for the analysis (Discount Factor 4%) with an adoption profile set to achieve nearly complete adoption of the scenario within this time frame. The BCA model however can easily be modified to test likely impacts of weaker or stronger adoption profiles.

Grazing Statistics Used in BCA

The following parameters were gleaned/ calculated from Council's data base and available mapping and publications

1. It is estimated there is approximately 38,000 ha or rural land in the Shire which is not covered by remnant or regrowth vegetation and therefore available for grazing. Remnant vegetation and regrowth vegetation is not included in grazing land scenarios but the area of regrowth (6170 ha) is added to Local Landscape Scenario for agro-forestry production.
2. Currently properties recorded as having cattle total 12,100 ha. It was estimated that 32% of this was forested or residential resulting in an estimated total current grazing estate in the order of 8,300ha (see maps Appendix 6).
3. Average lot size in the 374 lots included in a recent Country Noosa survey is 32 ha accounting for forests and recognising the majority of completely forested lots will not be currently grazed this suggests an average area available for grazing of around 25 ha/lot.
4. Currently only 9300 ha have been mapped as Class C grazing lands -suitable for grazing. However it likely grazing occurs and could occur on land mapped as Class A & B (suitable for horticulture and cropping) as well.
5. A quick review of grazing land type data (Appendix 7) suggest significant variation in the safe carrying capacity between A Class sown pasture with legumes to C Class naturalised pasture. The former being scarce locally and the latter widespread (Estimate modelled Class A 5%, Class B 35%, Class C 60%). Stocking rates estimates were therefore linked to land condition percentages based on the advice of long term extension agents in the local area (Class A 1 AE/ha, Class B 0.4 AE/ha, Class C 0.2AE/ha)
6. It was presumed that the land managers in the managed estate are likely to have higher than average management capability and therefore likely to have higher than average land condition and productivity. As a result an additional 0.2 AE/ha were added to the baseline for this scenario.
7. From data provided by a local grazier a gross margin figure of $417/AE was used in the BCA. For the Marketing Coop and Local Landscape Scenario premiums were added for enhanced returns from direct sales. The gross margin for the agro forest component for the Local Landscape Agroforestry Scenario was a conservative estimate of $50/ha/annum based on data from other projects in SEQ.
8. It should also be noted that there are positive externalities flowing from the adoption of sustainable grazing practices across a broader area of the shire that are not costed in the BCA. For example, Improvement of land condition will increase the natural buffer capacity of grazing lands and increase riparian condition therefore reducing the amount of nutrients and sediments entering waterways, estuaries and receiving waters. This can avoid losses in fisheries and algal bloom costs.

TABLE 7

RESULT OF BENEFIT COST ANALYSIS 2016-2026

ESTIMATED INCREASE IN SHIRE WIDE GROSS MARGIN (PROFIT) FROM ADOPTION OF SCENARIO

Scenario	Conservative Net Present Value $1000s	Conservative Annuity $1000s	Moderate Net Present Value $1000s	Moderate Annuity $1000s	High Growth Net Present Value $1000s	High Grow Annuity $1000s
Status Quo (without BMP)	145	18	1,850	228	4,160	513
Status Quo (with BMP)	2,299	283	5,141	634	8,991	1,109
Marketing Coop (without BMP)	1,024	1,226	5,445	673	11,459	1,413
Marketing Coop (with BMP)	3,178	392	8,746	1,078	16,290	2,008
Managed Estate (without BMP)	511	63	3,353	413	7,204	888
Managed Estate (with BMP)	2,665	329	6,644	819	12,035	1,484
Local Landscape (without BMP)	474	58	2,520	311	5,516	680
Local Landscape (with BMP)	3,973	490	7,067	871	11,604	1,431

Note: Results highlighted in red are considered the most likely outcome for that scenario considering the relative ease of adoption
Gross Margins are an estimate of farmer profit (i.e. selling price less production and acquisition costs)

Table 7 provides a summary of the results of the modelling (detailed in Appendix 8). The analysis suggests that without an active program to enhance the adoption of best management practices and to promote growth in the industry there is likely to be very little gain over the next decade from the 'Status Quo' scenario. It is considered with only a small investment that a conservative growth forecast of 1000 additional hectares is the most likely outcome. This would represent an annuity of only $18,000 of additional profit in the Shire. However, investing in an active sustainable grazing education program on a situation as normal basis may achieve moderate growth (additional 4,100 ha included). With the enhanced productivity from across the whole estate this scenario could achieve additional gross margin (profit) with a Net Present Value (NPV) of around $5million.

There are a range of scenarios that it is felt could realistically achieve an NPV of between $3-7 million. Both the 'Managed Estate' and 'Local Landscape' collaborative scenarios have the potential to drive growth in the order of $7million NPV over the next 10 years, based on an additional investment of $2million over this period in extension and learning programs and modest investment in pasture improvement (offset by increased c/kg for turned off animals).

The 'Small Marketing Cooperative' scenario was estimated to have the potential for the highest rates of return as increased income is included in this scenario as a result of improved farmer profit from direct sales mechanisms. However, this scenario was considered by the reference committee of key stakeholders to have a below average chance of adoption, based on the inherent difficulties and current stressors associated with running vertically integrated direct sales farms. However, while unlikely, in the best case scenario modelled (doubling of the current grazed estate) this scenario was estimated to be able to return in the order of $16 million NPV over the next 10 year period, which equates to an additional yearly annuity of $2million.

While there are many factors that will affect the future of grazing in Noosa this analysis is sufficiently robust to provide a case for further investment in the development of a local beef production system focussed on the local/regional food market. With current market conditions predicted to drive prices beyond the current near record levels as a result of unprecedented global demand for beef, there is good prospects for the industry. The challenge will be to source new stock at an affordable price to underpin local growth if large areas of the state come out of drought and start to restock large extensive grazing properties.

Principles and Framework Guiding Action Plan

A strategy of increasing the resilience of farming communities underpins any project which seeks to improve farmers' ability to cope with drought. In Noosa we are fortunate that drought is an infrequent occurrence, however, recent weather patterns suggest that forecasted increased climate variability including less regular but more severe weather events are something we need to plan for. Pursuing resilience purely from a financial perspective is unlikely to lead to the system-wide improvement necessary to achieve an appropriate level of industry-wide resilience. Part of the research for this project has therefore involved reviewing various resilience constructs and linked recommendations for how this attribute can be enhanced. An ancillary role for the action plan is therefore to identify how to enhance adaptive capacity and to plan for the transformation of agricultural systems that are unable to cope with current stressors and predicted trends.

We know that there is opportunity to create a local food system in Noosa that builds on underlying community values surrounding the shared 'sense of place', the formation of a distinct social identity, the growth of social capital and an ethic of stewardship. However, we haven't spent much time considering the significance of community and industry resilience in pursuing the aspired path toward a more sustainable district. In this regard Berkes and Ross (2013) have developed a model of a resilient community which provides a useful framework to structure a holistic action plan (Figure 24). In this model adaptive capacity (the ability to influence resilience) and agency (the capacity of an individual or group to act independently) are highly important. A resilient community (or industry) will organize themselves and take action through activating characteristics outlined in the model.

Figure 24. Community Resilience Model (Source: Berkes & Ross, 2013, p14)

The most important characteristics that assist the development of community resilience are summarised in Figure 24 including: people–place connections; values and beliefs; knowledge, skills and learning; social networks; engaged governance (involving collaborative institutions); a diverse and innovative economy; community infrastructure; leadership; and a positive outlook, including readiness to accept change. In this model these strengths are drawn into combined influence through agency and self-organization.

Sustainable use and development rests heavily on the three capacities of resilience, adaptability and transformability (Walker, 2006). Resilience in this context is the capacity of a system (e.g. local food system) to absorb disturbance and re-organise so as to retain essentially the same function, structure and feedbacks – to have the same identity after a shock. Adaptability (or adaptive capacity) is the capacity to manage or influence resilience; to avoid, or to engineer, regime shifts. It is determined by leadership, trust, social networks, social capital, social learning and governance. If a shift into a "bad" regime is inevitable, or can't be avoided, the only option is transformation. Transformability is, in this light, the capacity to transform into a different kind of system; different scales, new state - a new way of making a living.

The overarching objective of this action plan is to enhance the sustainability and resilience of beef production and the local food system. The following action plan is therefore structured around the key characteristics with a view to a more holistic community development approach to industry reconfiguration and renewal. While most action actions could be regarded as indirectly creating a diverse and innovative economy the adopted framework aims to make it clear that industry development actions on their own may not achieve the specific aims of the project. By underpinning the framework with the resilience framework it also provides some food for thought in terms of broader roles for Country Noosa and its network of stakeholders and institutions.

Community Development

Community development processes tend to use practical and achievable participatory projects (e.g., improving a neighbourhood or service), which community groups select and carry out themselves, as vehicles to empower the group or community through a series of small successes and learning experiences. Such processes build cohesion and a sense of community while achieving tangible outcomes. Problem-solving approaches to build social strengths and agency, resulting in outcomes such as infrastructure improvements and economic diversification, can be seen as resilience-building strategies.

Similarly, transformational changes in certain communities (e.g., from fishing to tourism) may help the region as a whole to become more resilient through increasing the diversity of livelihoods. Where deliberate transformational change at the regional scale is too costly or socially unacceptable, local transformational change in a sequential way can lead to feedback effects improving resilience at the level of the whole system (Walker et al. 2009).

Adaptive capacity and agency (Brown and Westaway 2011) can be facilitated by community members themselves through social learning (Goldstein 2008) or by external change agents, using well-known approaches in community development, such as building community strengths and relationships.

(quote from Berkes & Ross 2013)

It is noted in this version of the Action Plan it is premature to assign roles (who) or timeframes (by when) as these are aspects of action planning will require further collaboration.

Action Plan

Desired Outcome A: A diverse and innovative economy

Critical Success Factors

i. The use of available productive land is maximised for the sustainable production of quality food
ii. Employment and small business opportunities are diversified and enhanced by rural enterprise
iii. Profit from agriculture and local food systems is enhanced on an incremental basis

Actions

1. Establish a rural enterprise brokerage as a social enterprise

Rationale: There is a need to transform traditional agricultural supply chains to achieve the aspirations of Noosa residents and the preferences of local food consumers. Existing institutions and processes are not set up to facilitate this transition. There are no clear mechanisms where investors can come together with start-ups and/or existing rural enterprises seeking to expand. Those wishing to commence rural enterprises frequently do not have the full suite of knowledge, skills and networks to effectively navigate through the identification of suitable sites, regulatory approvals nor the full set of skills to undertake business and property planning. Further, processes to link land owners with farmers looking to lease, share farm or agist are currently uncoordinated.

Potential Tasks:

- Build and maintain relationships along a "values-based" local supply chain
- Provide fee for service brokerage to connect people and businesses along the value chain
- Maintain a data base of opportunities (e.g. land owners willing to lease land, producers looking for others to be involved in small marketing cooperative ventures etc.)
- Investigate innovative funding streams – e.g. broker environmental offsets as part of leasing arrangements.
- Facilitate the development of more enterprise mixes along the lines of the 'Managed Estate – Share Farming' and 'Local Landscape Cooperative' scenarios.

2. Conduct an innovative marketing campaign promoting Noosa produce

Rationale: The survey results suggest that there has been significant growth in consumer demand for local food over the last five years. This and other recent research highlights that the lack of promotion, lack of information on where to find local food, lack of product clearly branded as local; and perceived lack of availability as key factors constraining greater acquisition of local food. Consumers predisposed to more active local food consumption are likely to be responsive to novel and authentic experiences and stories that could underpin such a campaign. Raising the awareness of the broader consumer and visitors to the emergence of a Noosa food brand is considered important to drive momentum in the marketplace.

Potential Tasks:

- Decide on key values of the Noosa Food Brand (see linked action below)
- Work from grass roots up - developing farm stories and associated collateral based on demonstrating these values in practice (see linked action below)
- Design and develop a standard display which is suitable to fit in a farmers market or event space, but also in a 'pop up' shop (e.g. in a vacant shopfront in Hastings St, Noosa Junction, Noosaville). Negotiate with growers to provide stock as required.
- Consider 'fund raiser' promotions with local schools/ clubs.
- Develop and disseminate social and mainstream media content.
- Investigate options to reinforce food origin and values throughout the chain e.g. QR code

3. **Encourage the Initiation of a 'local', 'sustainable' & 'free range' meat provedore enterprise**

Rationale: Noosa fruit and vegetable growers are currently well served by provedores, wholesale buyers and distribution agents who are committed to the principles of local and regional food systems and sustainability. There is no current level of demand or supply to justify the duplication of their offering in a 'food hub'. However the same can't be said for meat producers. While local butchers are committed to varying degrees to local sourcing the lack of a defined entity, (or cooperative or collaboration of existing value chain partners) to undertake this role is considered a constraint to the growth opportunities for locally gown animal products. The Sydney based entity Feather & Bone provides a useful model that demonstrates the potential impact of a values-based provedore to the food service industry. Such a facility may also reduce 'burn-out' in local producers who are currently endeavouring to vertically integrate.

Potential tasks:

- Test the market by running 'Meat and Greet' events for Sunshine Coast and Mary Valley chefs to introduce them to the product offering from local meat producers
- Commence discussions with local businesses, and similar provedores from elsewhere who may wish to expand or collaborate to fulfil the role
- Establish the brand standards required to supply the provedore (see linked action below)
- Test the willingness for 'angel' investors, crowd sourcing etc. to provide backing to the enterprise.

<u>Desired Outcome B: Knowledge skills and learning</u>

Critical Success Factors

iv. Noosa District Producers are engaged in a process of continuous improvement and innovation and are progressively adopting sustainable agriculture best management practices that respect animal welfare, reflect community values, generate ecosystems services and enhance profitability and resilience.

v. A diverse network of education and training services and facilities are available to build capacity within rural enterprises to be part of a Local Food System, Agro-tourism and the like.

vi. Participatory action research collaborations continually explore new ideas and options for sustainable rural industry development.

Actions

4. Seek funding & implement an integrated area-wide best management program for producers

Rationale: While the growth in hobby, small area and part-time farmers is adding a rich new vein to the Shire's culture and economy there are known risks associated with new entrants into peri-urban agriculture (see Appendix 9). Similarly traditional farmers may still be practicing out-dated methods of farming passed down by previous generations that are known to create downstream impacts. Extensive experience with implementing the FarmFLOW area-wide management framework in SEQ over the last decade has shown that an engagement and extension program specifically designed for peri-urban landscapes can achieve significant improvements in the sustainability of food production. Investors may be willing to provide funds to reduce downstream water quality threats, manage pests and weeds and enhance biodiversity on farms. Capacity building should target pasture management, pasture improvement, cattle nutrition, herd improvement, wetland management etc. (Appendix 10).

Potential Tasks

- Liaise with Noosa Biosphere Environment Trust, Regional NRM Bodies and the like.
- Develop project application for running a FarmFLOW style program (Appendix 5).

5. **Build the marketing capabilities and business acumen of direct selling producers**

Rationale: Experience with business development programs on the Sunshine Coast suggests producers and artisanal food manufacturers who sell at least part of their range directly to consumers can benefit greatly from training in marketing within these retail contexts. Any producer who is seeking to diversify or enter new value chains that are more complex than traditional models of shipping product to the central market or saleyard is likely to benefit from training that builds their business planning and management skills. High attrition rates amongst small start-up business is frequently linked to lack of adequate knowledge and skills in these fields.

Potential Tasks:

- Drive active links to the Noosa CCIQ Mentoring Program and similar operations
- Seek funding to run specific seminars around core skills required for direct selling e.g. marketing/displays at events and markets, social media advertising etc.

6. **Advocate for greater public education and training delivery aligned to local food industry needs**

Rationale: Most current technical and tertiary education and training is aligned to the industrial model of agriculture and produces graduates with a level of specificity that can constrain their utility if employed within the more complex and diverse local and regional food system. There is a perceived unmet demand for formal training and education to meet the needs of existing players and new entrants. Regional Campuses and the Australian Agricultural College may be attuned to the need to customise existing offerings to reflect the regional industry characteristics. But more broadly if curriculum can be developed locally then distance and on-line delivery modes can drive further economic benefit from such initiatives.

Potential Tasks:

- Reach out to local Universities, regional TAFE and the Australian Agricultural College to advocate the need for courses/ subjects aligned to industry development in Local Regional Food Systems.
- Identify potential private providers of required education and training
- Take meaningful first steps – undertake training to multi-skill existing service deliverers e.g. Landcare officer so they can be accredited to conduct BMP audits and land condition assessments as part of a local brand standard certification.

7. **Instigate and develop active participatory action research collaborations with regional universities**

Rationale: Noosa can learn a lot from the experience of other localities in the development of dynamic and diverse local and regional food systems and rural enterprises in a multi-functional peri-urban landscapes. Regional Universities frequently place priority on research topics aligned to regional community and industry needs, in some programs this can require industry financial contribution. There is also need to set up a culture of evaluation and continuous improvement and innovation. Local participatory research can be simple and inexpensive, by providing producer collaborators to students and higher degree researchers to undertake case study analysis etc. Undertaking more 'blue sky' research will also help rural industry identify trends and threats early, so planning can be informed by realistic future scenarios.

Potential Tasks:

- Develop meaningful relationships with university units such as the USC Sustainability Research Centre, Business and Agriculture schools etc.
- Maintain a database of desired research topics, potential collaborators & skills within network.

Desired Outcome C: Community infrastructure

Critical Success Factors

vii. Public-private partnerships, social enterprises or similar effectively address key infrastructure gaps in a trusted local food value chain producing sustainable, ethical and healthy produce.

viii. A range of support mechanisms exist which foster the home-grown growth and attraction of new businesses into the local food system.

Actions

8. Investigate the opportunities to establish a cooperative 'bird-to-beast' abattoir

Rationale: Graziers and key stakeholders have identified the lack of a suitable abattoir aligned to the production characteristics of local meat producers as the single largest gap in the local value chain. While a number of regional abattoirs do provide contract killing services and will deliver to local butchers for boning and processing there as persistent concerns about the chain of custody, shared ethical standards and likely conflicts should Noosa seek to establish a brand in competition with those of the abattoir owners. Further, producers of animals other than cows and poultry have to send their animals hundreds of kilometres to be slaughtered which is inconsistent with the aspiration to lower food miles. It is understood a regional herd of about 20 000 head can be sufficient to make an abattoir viable and modelling suggest this could be easily achieved in the Sunshine Coast Mary-Valley region.

Potential Tasks

- Undertake an investigation of existing approved facilities that may be able to be brought back into production.
- Identify potential sites suitable for a new facility within the broader Noosa District (e.g. Nandroya industrial estate) and approvals required.
- Discuss opportunities with relevant government department's the potential for a facility to be linked to youth training programs and operated as a social enterprise.
- Engage potential investors and graziers who may be willing to invest as part of a cooperative venture.
- Conduct detailed viability analysis and proceed subject to results.

9. **Investigate opportunities for establishing farm & 'local food' business incubator for small start-ups**

Rationale: This is an enterprise model used in the USA (see Appendix 2a) that has successfully reduced the risk of people wishing to enter the industry. In the US these incubators are supported by government programs and universities and provide conditional access to shared land and equipment for primary production, packaging and some processing. Unemployment in rural Noosa is a chronic problem and innovative measures are needed to provide pathways for people to contribute to the local economy in a meaningful way.

Potential Tasks

- Investigate other similar facilities in detail to understand success factors and risks.
- Identify potential sites suitable for a new facility within the broader Noosa District and approvals required.
- Discuss opportunities with relevant government departments, universities and the potential for a facility to be linked to youth training and tertiary education and research programs and operated as a social enterprise.
- Engage potential investors and land owners who may be willing to invest as part of a cooperative venture.
- Conduct detailed viability analysis and proceed subject to results.

Desired Outcome D: Engaged governance (& Values & Beliefs)

Critical Success Factors

ix. Improved connectivity, coordination, communication and trust and shared decision making between the industry/ community and all institutions impacting on the future of local food system, through the establishment of horizontal and vertical alliances.

x. The Noosa Planning scheme is amended to reflect and support the desired form of agricultural and food systems development in the shire.

Actions

10. Country Noosa incorporates and takes on a key role in the governance of rural enterprise in Noosa

Rationale: Experience elsewhere suggests that a 'polycentric' governance model can be effective to drive ecological sustainable development. Such an approach involves nested institutional arrangements which connect government and non-government organisations at multiple scales. Transforming local rural enterprise will require industry and citizen influence on policy and resource allocation decisions to ensure the inertia behind the 'status quo' does not lead to unwanted future impacts. Since the inception of Country Noosa it has grown 'organically' to represent and link a viable network of key stakeholders and landowners concerned about the future of the hinterland and its economy. It would appear logical for the network to formalise its role in driving a collaborative governance model to pursue the priorities emanating from this project and the Local Economic Plan.

Potential Tasks:

- Noosa Country expands its role to play a key governance role with active links to institutions at district, regional and state-wide scales to influence the policies and processes that impact on the future of the local food system.
- Country Noosa offers to take on lead role in coordinating the Rural Enterprise Priorities under the Noosa Local Economic Plan (currently draft).

11. Advocate for statutory planning settings that foster sustainable local food system development

Rationale: This and previous research has identified a common experience of small-scale producers feeling unjustly lumped with industrial scale agriculture in terms of the development control regime and other statutory approvals. A common call is for red-tape reduction. However, it is suggested that advocating for the higher strategic levels of the planning scheme to be amended to reflect the desired form of sustainable agriculture and local food value chains in the shire may in the long run have more impact. Just arguing for reduction in assessment levels, application fees and statutory impact assessments may not achieve the desired outcome if fundamental differentiation isn't made in the vision and desired outcomes in the scheme. Once this has been achieved then collaboratively developing an appropriate development control schema should be straight forward.

Potential Tasks

- Country Noosa actively engage Council in developing the process for review of rural planning settings.
- Engage relevant state government officers and experts to identify best practice provisions relevant to small-scale production systems (e.g. regenerative systems) and seek to identify appropriate planning standards for sustainability which may be incorporated into acceptable solutions in the plan.
- Be prepared to lobby state government officials and members of parliament to challenge the status quo in terms of state government interests in unsuitable forms of agriculture not consistent with the strategic objectives for the Shire (e.g. Broiler farms)

Desired Outcome E: People–place connections (& Values and Beliefs)
Critical Success Factors

xi. The Noosa economy is diversified by producing food which embeds fundamental social drivers linked to people's sense of place and the social identity of Noosa as a sustainable community.
xii. Local Food is distinguishable in the market place such that peoples purchasing behaviour can reflect their underlying connection with the place they live or the district they have travelled to experience.

Action

12. Develop and phase the introduction of a Noosa food brand or appellation

Rationale: Since the early settlers people have migrated to Noosa as a result of the quality of its natural environment and abundance of natural resources. Whether people have arrived as a result of their lifestyle driven pursuit of the 'rural idyll' or are here for a short period to experience some of Noosa's internationally recognised nature-based tourism opportunities, when they get here they quickly form a strong connection with the place. Many also ascribe to the local ethic of care toward the environment. Tapping into this connection to drive economic growth in an authentic and meaningful way will help achieve a more resilient community. On a practical level substitution (selling central market produce in the guise of local and/or organic produce) in local direct sales venues is a persistent concern of local growers and others in the value chain. This threatens the credibility and integrity of genuine local produce. Setting entry level standards and local certification requirements can address this. Higher quality standards have proven successful for similar local food cooperatives e.g. Cape Grim Beef in Tasmania, Dorper Lamb in WA to tap into higher value and overseas markets.

Potential Tasks:

- Establish core principles to guide values –based supply chain relationships, brand standards etc.
- Continue negotiation with all sectors of the value chain in regard to the desirability of a brand or appellation for Noosa.
- Conduct further consumer research to refine understanding of the key elements of place that could be reflected in the brand.
- Identify appropriate local level criteria which reflect the values of the place and more simple and less costly protocols to certify producers as meeting these criteria.
- Identify specific capacity building required to facilitate grower participation, if more rigorous brand standards and accreditation are to apply.
- Phase the introduction of brand standards to bring producers along with the process.

Desired Outcome F: Social networks
Critical Success Factors

xiii. Farmers enjoy a greater share of the profit generated from values-based supply chains where producers, processors, distributors, wholesalers, retailers and restaurants work together in equitable relationships based on trust.
xiv. Networks and partnerships of 'not for profit' service deliverers work collaboratively to provided needed support and advice to the local food system.

Action

13. Continue to develop relationships and commitment to a values-based supply chain for local food

Rationale: Social connection and relationships are becoming an increasing part of the post consumerist society. Building supply chains on trusted social networks is a key to providing a genuine product to the marketplace. Both producers and wholesale buyers provided evidence of where this is not occurring currently and expressed strong support for the concepts underpinning values-based supply chains. With the consumer survey identifying connection to and support for the local farmer as by far the most significant driver for local food purchases, developing value chains which facilitate this connection is an obvious opportunity.

Potential Tasks:

- Build on the relationships initiated as part of this project and create opportunities for people from all parts of the supply chain to interact and develop business relationships.
- Develop a network of service delivery partners/ collaborators from the not for profit sector e.g. Landcare, MRCCC, CCIQ Mentors to further embed the social drivers for local food systems.

<u>Desired Outcome G: Leadership and Positive Outlook</u>

Critical Success Factors

1. The level of agency and self-organisation in rural Noosa is enhanced through active leadership programs targeted at rural enterprises that drive driving foresight and optimism in the industry.

Actions

14. Country Noosa initiates and coordinates the delivery of a 'Building Rural Leaders' program

Rationale: Many of the above actions will require a well-developed group of leaders and rural 'champions' to achieve a successful outcome. Experience shows that active development programs for young (and not so young) farmers can greatly improve the lot of primary producers in rapidly growing peri-urban areas (e.g. Hillsborough Florida). Similarly the Qld Government ran a rural leadership program for many years which greatly enhanced the capacity of producers, industry sectors and local action learning groups. Investment in personal leadership skills is likely to benefit all tiers of the local food system by establishing a culture of continuous improvement and innovation and a higher capacity for effective planning, team work and communication.

Potential Tasks:

- Investigate existing leadership programs, deliverers and training / mentoring capacity within the existing networks.
- Identify desired outcomes from program and potential participants (e.g. producers with potential)/ sector targets (up and coming members of community groups).
- Source funding or test willingness to pay for personal development training.
- Run a pilot program and evaluate outcomes.

CONCLUSION

The results of this project are cause for optimism. The organic emergence of a local food system in response to growing consumer demand for authentic local produce provides a solid base for local economic development initiatives. Good will and interest among existing players within the value chain and a shared set of underlying values and aspirations for local produce presents real opportunities for entrepreneurial and collaborative industry development. The project has also identified a number of practical options to increase the sustainability and resilience of local productions systems to cope with climatic variability.

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