GROWN LOCAL FOOD NETWORK – FROM PLOT TO PLATE 2022/23

Additional Short Report for Incredible Edible Broome

By Michelle Pyke (February 2023)

Context

- The original "Grown Local Food Network – from plot to plate" (hereafter called 'the project') project description highlights uncertain food security due to the remoteness of Broome. The project proposes a solution of a network of community managed farm plots/spaces with a social enterprise model to distribute food locally for consumption, while also achieving several social goals. The project description highlights low socio-economic demographics and remote Aboriginal communities as being particularly at risk from low food security including limited access to affordable nutritious fresh food.
- The main project report, researched and written by Belinda Colson, is entitled "Grown Local Food Network: the Kimberley's real food network". The report provides qualitative and quantitative information about the nature of some of Broome's fresh produce growers/suppliers and sellers/retailers. This Information can be used to understand:
    - challenges to increasing local Broome Fresh Food Supply Chains,
    - benefits of increasing local Broome Fresh Food Supply Chains, and
    - support required to help grow Fresh Food Supply Chains in Broome.

  The report can also inform,
    - future grant applications or business cases (e.g. by using quantitative data regarding economic value of the food producing industry and employment statistics), and
    - questions for further research (in particular, see report recommendations).
- The "Plot to Plate Project", in particular, involves multiple and varied strategies aimed at increasing the supply and consumption of locally grown fresh produce (including boutique value-added produce made from local produce e.g. gubinge products and honey).
- One area of particular interest to Incredible Edible Broome is the idea of fostering local Fresh Food Supply Chains. That is, food supply chains where locally grown produce is made available for direct sale to Broome (and surrounding) residents. There are multiple questions to explore to identify the potential benefits and challenges for Incredible Edible Broome should the organisation decide to invest in supporting local Fresh Food Supply Chains or setting up their own. In addition to the recommendations in the "Grown Local Food Network: the Kimberley's real food network" report, the focus of this brief document is to better understand what a local Fresh Food Supply Chain (FFSC) is, and explore Incredible Edible Broome's potential role in expanding local FFSCs.

Project description from grant application: The Grown Local Food Network from plot to plate project led by Incredible Edible Broome (IEB) addresses the issues of food security and sovereignty in the remote township of Broome and surrounds. The majority of food travels over 2000km; creating security, sovereignty, cost, food miles and freshness issues. Worst affected are people in low socio-economic situations where limited options hinder their needs. The project addresses these issues by establishing a network of community managed farm plots and working towards a social enterprise model that can coordinate access to food, workshops and communal spaces that are welcoming, learning environments delivering nutritional, physical and mental health benefits. A network will support engagement across various sectors of the community. Existing gardens: Broome North Community Garden; Community Verge garden; PCYC community garden; La Grange Remote Aboriginal School Garden; Proposed gardens are: Uniting Church Op Shop; Recovery Centre Garden.

This document begins to explore one strategy for increasing access to locally grown food in Broome. That is, if, and how, Incredible Edible Broome could seek to support, or expand, existing local Fresh Food Supply Chains (FFSC), and/or generate its own FFSC, with the aim to increase availability of locally sold fresh produce.

AIM OF THIS DOCUMENT

- Define important terms.
- Summarise why local Fresh Food Supply Chains are valuable or desired.
- Provide an overview of local producers of fruit and vegetables in and around Broome.
- List ideas for supporting existing, or generating new, Fresh Food Supply Chains.
- List of recommendations to progress project.

TERMINOLOGY / CONCEPTS

URBAN AND PERI-URBAN LOCAL FRESH FOOD SUPPLY CHAINS (FFSCS)

Local FFSCs provide supply strategies for fresh food to be sold within a local area (geographically defined) soon after harvest. This contrasts with conventional food supply systems where fresh produce is transported to a central place, usually a large city, and redistributed. According to Nakandala and Lau (2019)[1] "…[I]nnovative urban and peri-urban local fresh food supply chains (FFSCs) are emerging to do two things: they meet the increasing demand from contemporary urban consumers for locally grown fresh produce and they address the drive for sustainability of all local food systems' stakeholders".

Within a Fresh Food Supply Chain, two big picture concepts are important: food supply chains and logistics.

FOOD SUPPLY CHAIN

"A food supply chain or food system refers to the processes that describe how food from a farm ends up on our tables. The processes include production, processing, distribution, consumption and disposal[2]". According to Associate Professor Elizabeth Jackson from Curtin University, supply chains are complex and include "…the business relationships, the negotiations, the procurement practices, [and] the relationships between buyers and sellers within markets that make up supply chains[3]". Logistics are also a part of food supply chains.

LOGISTICS

According to Associate Professor Elizabeth Jackson from Curtin University, logistics is "…a subset of supply chain management …In its simplest possible form…[logistics] is the methods and modes of transport [including] road, rail, maritime and air transport, and the associated systems, [including] the warehousing systems and the distribution systems…to get physical goods from one point in the supply chain to another[3].

[1] Nakandala, D. & Lau, H. C. (2019). Innovative adoption of hybrid supply chain strategies in urban local fresh food supply chain. Supply Chain Management: An International Journal, 24(2), 241-255.

[2] https://hwpi.harvard.edu/files/chge/files/lesson_4_1.pdf

[3] Jackson, E. (2023) The vulnerability of Australia's food supply chains, Blueprint for Living, Radio National (11 February 2023) https://www.abc.net.au/radionational/programs/blueprintforliving/australia-food-supply-chains-vulnerability/101958268

WHY PROMOTE LOCAL FRESH FOOD SUPPLY SYSTEMS IN BROOME?

Australia has a highly centralised system of food processing and distribution. Refined over decades, this centralised system has, according to Associate Professor Elizabeth Jackson from Curtin University[4], allowed food to be sold to the Australian population at potentially artificially low prices. That is, the centralised system allows great efficiencies which then allow food to be sold at low prices. However, these centralised food systems have been shown to be vulnerable to two major factors, one being natural disasters, and the other being labour shortages. Both factors have caused interruptions to Australia's centralised food supply systems in recent years (and ongoing), meaning supermarket shelves can be left completely empty where transport routes are cut by disasters or staff are not available.

Local Fresh Food Supply Systems may be one way of ensuring a local supply of some fresh produce that is not affected, or not affected as much, by natural disasters or labour shortages. Other benefits of FFSSs include:

- meeting demand for the "food literate" community, being educated individuals who wish to buy local produce with the potential benefit of that produce having a higher nutrition and better taste given the shorter time from plot to plate,
- potentially higher overall sustainability of the produce given, for example, less embodied carbon in the plot to plate route (e.g. lower transport carbon).

In the last few years and even months Broome, and other Kimberley communities, have revealed their vulnerability to centralised food supply systems. In 2023, Fitzroy Crossing has been completely cut off from food supply systems due to flooding damage to the only transport route (bridge) into the town. At other times, supermarket shelves across region have been left sparse or bare from the disruption of conventional food supply systems during Covid or seasonal cyclone activity.

Incredible Edible Broome is interested in identifying a role for the organisation in expanding local Fresh Food Supply Chains with the goal of increasing the sale of locally grown fresh fruits and vegetables in Broome or surrounding Aboriginal Communities. There are multiple ways Incredible Edible Broome could support local Fresh Food Supply Chains. To inform these strategies, it is important to look at the existing fruit and vegetable market in Broome[5], which is summarised in the next section as a table. Following this is a brief list of ideas for supporting existing local Fresh Food Supply Chains or an Incredible Edible Broome-led FFSC.

[4] For more information go to Jackson, E. (2023) "The vulnerability of Australia's food supply chains", Blueprint for Living, Radio National (11 February 2023) https://www.abc.net.au/radionational/programs/blueprintforliving/australia-food-supply-chains-vulnerability/101958268

[5] Details in table below from companies' individual websites and the Food Industry Innovation Program, 2021. A taste of the Kimberley Region: food and beverage capability guide. Department of Primary Industries, Kimberley Development Commission. See: https://www.agric.wa.gov.au/sites/gateway/files/Kimberley%20Region%20Food%20and%20Beverage%20Capability%20Guide.pdf

TABLE 1: BROOME REGION FRUIT AND VEGETABLE GROWER DETAILS[5]

Name	Area	Product grown or sourced	Produce timing	Product detail	Grower/Supplier detail	Distribution detail	Connection to community	Environmental commitment	Website
Shelamar / West Australian Corn Growers	Eighty Mile Beach	Corn and beans	Depending on the season corn and beans are grown in Broome (five months of the year) or Gingin (seven months of the year).	Packed green beans (400g); various forms of pre-packed corn and loose corn (yellow and bi-colour);	Trandos family - originally from Greece, started out growing produce in Wanneroo in 1939. Three generations later have expanded to 4 locations including 80 mile and now exporting. Largest grower of sweet corn and beans in WA.	Early 2021 started exporting via sea freight from Fremantle to Singapore. Also supply major chains and specialty stores.	Connect with the community using promotions and competitions, including one competition where the winner received a trip to Broome. Promo called Taste the Kimberley Sun. Active website with a blog.	Trandos family came up with a way to package cut corn without a tray, substantially reducing packaging. See ABC article (2019): https://www.abc.net.au/news/rural/2019-07-09/plastic-saved-on-corn/11287164	https://www.westaustraliancorngrowers.com.au/
Kimberley Table Grapes	Skuthorpe	Asparagus and table grapes		Region's first major commercial table grape planting. Planned first harvest was mid 2021.					
Shamrock Gardens		Watermelon							
Kimberley Meat Company - Subsidiary of Yeeda Pastoral Company Pty Ltd.	Broome	Premium grass-fed beef offered in a variety of products and cuts.	Year round	"Their established beef cattle herd of approximately 80, 000 head is free to roam across 1 million hectares of the pristine and disease free Kimberley region". Cattle are free range grass fed, meaning the meat tends to be leaner and rich in Omega 3 and 6. From website.	Officially opened in 2016, a wholly owned subsidiary of Yeeda Pastoral Company Pty Ltd, KMC is a full service abattoir that supplies its customers with consistent, premium high quality manufacturing grade beef.	Wholesale, direct sale, retail, export. Sell locally from Broome outlet in the LIA.		"Animal welfare, food safety and eating quality are of paramount importance to core business philosophy". Various certificiations include Animal Welfare and Organic.	

Tenderspot Meat Company	Broome, Kununurra, Port Hedland	Beef, lamb, pork, chicken and seafood all WA produce. Game and gourmet small goods/pantry ingredients sourced from around Australia	n/a - frozen products or received weekly	See website - large range of meats and seafood.	Dredge family. Oldest continually run butcher in Broome, operating since 1970. Success of their Broome store enabled expansion into east Kimberley and the Pilbara.	Retail stores in Broome, Kununurra and Port Hedland. Also have a large wholesale operation in the Kimberley and Pilbara, supplying government and industry. Supplies many top restaurants and hotels in Broome and wider North West.	"Tenderspot supports the local Broome, Kununurra and Port Hedland communities with our fundraising sausages so grassroot country sporting organisations and clubs can raise much need funds." Active website and facebook page.	Website describes many of their producers using sustainable farming methods and high animal welfare practices. Chicken sourced with no added hormones or steroids.	https://www.tenderspotmeat.com.au/ourproducts
Cone Bay Barramundi	Short Street, Broome WA 6725	Barramundi	Year round	"The largest producer and supplier of ocean grown Barramundi in Australia"	Barramundi Group - operate ocean farms in Singapore, Australia and Brunei	Sell vacuum packed frozen fish from their Broome office. Supply Australia wide and a small export market to China and Singapore.	Well known product, used in top end restaurants, retail locally from Broome Chinatown office.	Best Aquaculture Practices (BAP) certified since 2016. First company to secure a 4-star Best Aquaculture Practices (BAP) rating in both Singapore and Australia.	https://barramundi.com/
Walaja Broome Bush Honey	Broome	Melaleuca honey, Native Grevillea honey, Bloodwood honey, Watermelon honey	Year round	"The Walaja hives are located on the Yawuru Aboriginal Group owned Roebuck Cattle Station, just outside Broome. This fertile country hosts biodiverse native bushland and the warm tropical climate enables the bees to thrive." Honey types are described on their website: https://www.kimberleybushhoney.com.au/	Owned and operated by Broome locals Dave and Di Appleby and their family.	Retail, Wholesale, Online, Various retailers in Broome including Cable Beach Club & Resort, Yuen Wing Store, Broome Natural Wellness, Broome Thyme, The Broome Pantry, Flavour Bytes	Well known locally, stocked in multiple Broome stores	100% organic, natural, unprocessed, no additives. Hives located on Roebuck Plains during the wet season and moved to Shamrock Watermelon warm during the dry season.	https://www.kimberleybushhoney.com.au/

Kimberley Wild Gubinge	Pender Bay, Dampier Peninsula	Kimberley Wild Gubinge pure fruit-flesh dried powder; Kimberley Wild Gubinge pure fruit-flesh dried wafer	Year round	Wild harvested by Indigenous people. Fruit for their product completely sourced from the Dampier Peninsula, WA. This produces certainty of provenance.		Online sales, Various retailers in Broome as well as Darwin, Margaret River and Sydney	KWG committed to providing opportunities for Aboriginal people in the local community and wider region through preserving and promoting cultural food knowledge. Committed to paying a fair wage to harvesters who harvest in Mankal (Dec - Feb) in extreme weather conditions.	"As Stewards of the Land, they are compelled to create products with the lowest carbon footprint and to actively practice cultural landcare". HACCP Australia Certified.	

TABLE 2: IDEAS FOR GROWING LOCAL BROOME FRESH FOOD SUPPLY CHAINS

Options	Description / Steps / What	Benefits / Why	Inputs	Risks	Limitations	Recommended priority
Assist growers already selling locally to expand	Survey main growers of fruit and veg to 1) identify if they desire to increase the proportion of their produce being sold to the Broome market, 2) identify what is preventing them from doing this, and 3) identify what would help them increase the proportion of produce sales to Broome market. (Also see Growing Local Food Network: the Kimberley's real food network)	Most efficient option as the idea would be to expand sales of fruit and vegetables locally through existing logistics systems. That is, not requiring any new, or requiring minimal new, infrastructure or adapted distribution systems.	Unknown, depending on strategies chosen.	Risk to producer and IEB unknown, depending on strategy. However, the aim would be to identify the most efficient means to enhance an existing Fresh Food Supply Chain, and therefore minimise inputs and risks.	Start small to identify an achievable project, which therefore only marginally increases fresh produce sold. However, hopefully this would be a long-lasting increase.	High priority
Community gardens distributing through local stores	IEB sets up or expands internal supply chain between community gardens and local retailers.	Offer a wider variety of local foods than normally available (e.g. fresh produce that is not normally sold in supermarkets); maximise use/consumption of produce from community gardens that is already being produced (reduces waste); one retailer already on-board - Health Food Shop in the Boulevard; positive impact for volunteers and IEB community through making the best use of produce already being grown by that group.	High - likely requiring high volunteer effort.	Risk to producers: Producers not involved. This option does not try to shift existing large-scale supply chains. Risk to IEB: low to high. This option relies on the enthusiasm and effort of local volunteers. Relying on local volunteers means efforts may not be sustainable long term (e.g. if the volunteer leaves town or can no longer participate). Also, this option will likely run at an economic loss, with dollars recouped from produce being less than the economic value of volunteer input. However, these factors may not be important to the people involved compared to the satisfaction of seeing local produce put to good use. Also, the risk to IEB may depend on the scale of FFSC the organisation attempts to generate and the expectations of the retailer receiving the produce. If a retailer is willing to accept locally grown produce sporadically, the overall risk to both retailer and IEB would appear low, and the benefits may still be high.	Small increase in local food consumption. Sometimes would involve foods that aren't widely popular and therefore may only be of interest to a small number of people in the Broome community. On the other hand, the produce may be highly valued to the individuals involved in its redistribution, sale and consumption A new opportunity has also recently arisen for this strategy. The new Lions Outback Vision "LOV Food" café has requested surplus fresh produce from Broome gardeners for use in their meals. This could offer a pilot project for a new Broome Fresh Food Supply Chain whereby IEB volunteers coordinate surplus produce to be provided to the LOV Food café.	High priority – small scale, flexible FFSCs Low priority – larger scale FFSCs with higher expectations

Selling fruit and veg seconds through local store	Survey producers of fruit and veg to determine if they have a supply of seconds that could go to the Broome market. Conduct research into the seconds store in Kununurra. Identify relevant policies and procedures for selling fruit and vegetable seconds.	Potential to identify a substantial supply of additional produce to put into local Broome market. Would expand conventional produce that is known to be consumed by the everyday buyer. Would likely only succeed if there is a benefit to the producer (win-win). May enable lower cost fruit and veg to be available to the Broome community.	May require new systems to treat and quality-assure seconds produce before it is sold to consumers. May require new distribution systems.	Risk to producers: may incur increased economic inputs given the increased volume of produce requiring treatment and quality assurance, with such costs, however, recouped by sales (or the system isn't likely to be adopted/sustainable). Risk to IEB: medium – high. As IEB will be entering a new area of commercial food production and distribution. Ideally IEB would attract a paid position to support this. Requires a long-term commitment with investment in relationships between IEB (supplier) and grower key. Requires IEB to increase knowledge in the field of commercial food growing and supply chain systems.	Increase in local produce through seconds sales would not be year-round, that is, only available as those products are harvested (they will not be stored for continuous availability). However, selling food as it is naturally available is one of the values of IEB hence not an ideological problem, only a problem potentially for securing stable consumer purchasing of the products.	Medium priority
Box Scheme	Identify potential for another fruit and veg box scheme to start up.	Provide a centralised local system for distributing local/WA produce.	High	High – recommend first interviewing in detail past providers of Box schemes to identify pros and cons of this approach.	Appeals to limited proportion of the community, largely those with higher incomes.	Low – could be raised to medium if more than one individual commit to developing this option.

RECOMMENDATIONS

- **IEB board/members to discuss the values underpinning their desire to expand local Fresh Food Supply Chains and what their vision is, with the view to generate a SMART objective(s) for their involvement in Broome FFSCs.**
  This review suggests there are different paths to growing local Broome Fresh Food Supply Chains, which have different benefits and risks for those involved. Also, different strategies will make local produce more available to different demographic groups in Broome. To help IEB proceed, it may be useful for the IEB board and/or members to identify their target audience (who they want to increase local produce availability for), what they want to see happen and why. If there is consensus, the group could develop one SMART objective for expanding local FFSCs. Alternatively, if there is a diversity of interests, individuals could identify smaller SMART objectives they could work towards regarding FFSCs.

  Next steps depend on whether a particular strategy is chosen (see Table 2). However, some ideas to proceed include the following:

- **Literature /desktop review on local Fresh Food Supply Chains around Australia.** Identify how they work, benefits, challenges, inputs, goals. Identify how an expanded Broome FFSC could look based on successful FFSCs around the Country. Potentially identify key individuals and academics working in this field to identify whether they will provide advice on any future projects. (See main project report recommendations for more ideas here).

- **Targeted survey for local fruit and vegetable growers to identify if they see opportunities to expand selling of their fresh products to the Broome market.** Identify challenges and needs around this, with the aim to identify small and achievable actions that IEB could assist with (e.g. advertising campaigns, centralised information systems, likely requiring new funding applications).

- **Investigate seconds store in Kununurra**.

- **Investigate option to generate pilot FFSC between community gardens and one or two local retailers (e.g. Health food shop and LOV Food Café).**

- **Investigate option to generate pilot FFSC between community gardens and services offering food to people in need (e.g. Feed the Little Children).**

- Depending on strategy decided upon, conduct a **strategic community survey** may help. Survey must be tailored according to the strategy it will inform.