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FINDING VALUE IN AN ALTERNATIVE CARING FOOD NETWORK

A study of how localised regenerative small-scale growers can
build social value in our food system.

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ABSTRACT

Through its significant dairy farming sector, Taranaki epitomises modernised food production and distribution within a global food system. Alongside this, a burgeoning community of small-scale growers exist who do not aspire to large scales or optimised profitability. These growers support localised food production, diversity in distribution, regenerative practices, and caring social values. I argue they are fundamentally 'resocialising' food in a way that enhances social, cultural and economic values, and are creating wellbeing for local communities through an ethic of care. There is little literature regarding the social attributes of food grown by small-scale growers for local consumption. This thesis aims to contribute to that body of work by offering an ethnographic account of small-scale growers. I argue that these growers build and strengthen a sense of community thereby creating an interconnected web of organised care relationships that form a 'meshwork', connecting people to place within Taranaki. I will show that understanding the relationship between people and food procurement goes beyond a financial exchange, disentangling food from a global food system where it may be 'food from nowhere' to situating it in a localised setting where through processes of resocialisation, it becomes 'food from somewhere' (McMichael, 2016). However, despite creating positive social values, small-scale growers struggle to hold their space within the global food system because they are frequently deprioritised, undervalued, or unrecognised. This thesis concludes by showing Taranaki's regenerative small-scale growers are able to create a meshwork of food production and distribution that resocialises food through values of care.

Keywords: global food system, small-scale growers, regenerative food system, ethic of care, meshwork, local food systems

PREFACE

The research focus for this thesis came about through the PIVOT project funded through Massey University, and the Bashford-Nicholls Trust. This relationship is outlined in my methodology section.

I have used the terms Aotearoa and New Zealand interchangeably, when I would usually use the words together. In this thesis, for brevity, I alternate between the two terms and have also chosen to use the following acronyms:

- **SSGs** – small-scale growers
- **AFNs** – alternative food networks
- **RA** – regenerative agriculture

Throughout my thesis, I refer to eaters and consumers. The term eater signifies those eating food they have produced themselves or may have received without a financial exchange, whereas consumer signifies a financial exchange for produce.

I have used ***Cavolini*** font to identify the ethnographic field memos I wrote, which are presented as vignettes in Chapter Five.

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He aha te mea nui o te ao? He tangata he tangata he tangata!

What is the most important thing in the world? It is people!

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GLOSSARY OF MĀORI KUPU

from *Te Aka Māori Dictionary* (<https://www.maoridictionary.co.nz>)

Ariki – (noun) paramount chief, high chief, leader, first-born in a high-ranking family.

Hapū - (noun), clan, tribe, subtribe - section of a large kinship group and the primary political unit in traditional Māori society. A number of related hapū usually share adjacent territories forming a looser tribal federation (iwi).

Hauora wairua - (noun) spiritual health.

Hua Parakore – (verb) to bear fruit, originate, be abundant, accrue. (stative) be pure, uncontaminated, having no impurities. In current regular use, it refers to a Māori organic framework.

Hui - (noun) gathering, meeting, assembly, seminar, conference.

Iwi - (noun) extended kinship group, tribe, nation, nationality, race - often refers to a large group of people descended from a common ancestor and associated with a distinct territory.

Kai – (noun) food, meal.

Kaitiaki – (noun) guardian, caregiver, steward.

Kaitiakitanga - (noun) guardianship, stewardship, trusteeship, trustee.

Kaupapa - (noun) topic, policy, purpose, scheme, proposal, agenda, subject, theme, issue.

Kōrero - (noun) speech, narrative, story, discussion, conversation, discourse, statement, information.

Kūmara - (noun) sweet potato, kūmara, Ipomoea batatas.

Kupu - (noun) word, vocabulary.

Mahi - (noun) work, job, employment, practice, occupation, activity.

Maara/māra – (noun) garden, cultivation.

Mamae - (noun) ache, pain, injury, wound.

Mahinga kai - (noun) garden, cultivation, food-gathering place.

Maramataka - (noun) almanac, Māori lunar calendar, calendar - a planting and fishing monthly almanac.

Mauri – (noun) life force, vital essence, special nature, source of emotions - the essential quality and vitality of a being, entity or physical object.

Maunga/Mounga - (noun) mountain, mount, peak. Mounga is the Taranaki dialect for mountain.

Mita - (noun) rhythm, intonation, pronunciation, dialect.

Pā - (noun) fortified village, fort, stockade, city (especially a fortified one).

Pākehā - (noun) New Zealander of European descent - probably originally applied to English-speaking Europeans living in Aotearoa/New Zealand.

Pātaka/Pātaka kai - (noun) storehouse raised upon posts, pantry, larder. A pantry for food storage.

Raupatu - (noun) conquest, confiscation.

Tangata Whenua - (noun) local people, hosts, indigenous people - people born of the land.

Te Ao Māori – Māori worldview acknowledging interconnectedness and interrelationship of all living and non-living things.

Te Tiriti o Waitangi – The Treaty of Waitangi.

Tikanga - (noun) correct procedure, custom, convention, protocol that are developed over time and deeply embedded in the social context.

Tipuna - (noun) ancestor, grandparent.

Tūrangawaewae - (noun) domicile, standing, place where one has rights of residence and belonging through kinship and whakapapa.

Waka - (noun) canoe, vehicle.

Wairua - (noun) spirit, soul.

Whakapapa - (noun) genealogy, lineage, descent.

Whanau - (noun) extended family, family group.

Whenua - (noun) land - often used in the plural.

CHAPTER 1: THE NEED FOR CARE IN OUR FOOD SYSTEM – INTRODUCTION

*Iti noa ana, he pito mata
It may be small, but it has the potential to grow and produce
Whakatauki*

1.1 INTRODUCING THE RESEARCH TOPIC

This thesis considers the capacity for care by small-scale growers (SSGs) who increase access to diverse and nutritious foods through a caring food system. They achieve this through short supply chains, by creating a variety of food distribution practices, and by engaging ethically with ecology and people. These social concepts enhance connections between growers, eaters, and food that can be depicted within a relational meshwork. By doing so, they 'resocialise' food. Socialisation is a process of developing values and beliefs consistent with particular contexts such as family, church, and other organisations or communities (Gecas, 2001). Therefore, the process of resocialisation, is the reformatting of values and beliefs for a variety of reasons. "The key task in resocialization is the replacement of the person's previous set of values, beliefs, and self-conceptions with a new set based on a new ideology or worldview, that is, the 'death' of the old self and the birth of a new self" (2001, n.p.). In relation to food, I invoke the concept of resocialisation to capture a shift in priorities and values regarding food. The reconnection of people to the food they eat resocialises relationships with growers, environment, and local communities.

Additionally, I will identify how SSGs create an integrated meshwork that builds local food resilience and diversity. Meshwork theory, as articulated by Pavlovich et al. (2021) is a system of organising food based on relationality and 'becoming'. The analogy of a meshwork reflects how entangled relationships create a complex arrangement of 'knots', 'threads', and 'weave'. The focus is on a dynamic process of movement represented as threads, intersected with knots of interaction, and a resulting weave of food system resilience:

From a meshwork perspective, food system(s) are not discrete entities with fixed boundaries; rather food production, distribution, and consumption

exist as fluid and dynamic connectivities, practices, and interactions that comprise lines of flow that are woven and entangled in various relationalities. We therefore place relational connectivity at the core of the meshwork as a reflexive awareness of the nuanced, interconnected layers of meaning inherent in the paradoxes, tensions, and complexities of the lived experiences of organizing. (Pavlovich et al., 2021)

My interest in local meshworks of food production comes from the externalities and negative social impacts of a globalised food system. Transactions involved in growing and distributing food worldwide generates an interconnected global network. This network effectively transports large quantities of food around the world via complex commodity chains that structure food into transnational flows. It encourages scaling up of food production and centralisation of control through powerful agribusinesses. The resulting system provides enormous volumes of consistent, affordable, and relatively stable food supply throughout the world (Gereffi & Korzeniewicz, 1994). The modernisation and intensification of agriculture has facilitated the creation of processed 'durable foods' to supply this global system (McMichael, 2009). Agri-food businesses have enhanced their productivity and prioritised the most efficient ways of producing food to the exclusion of other outcomes such as social and environmental wellbeing (Beacham, 2018).

And while there are benefits to this system, it is necessary to acknowledge how this system developed through colonisation and globalisation, which embeds processes and transactions influenced by global socio-political factors creating an inequitable status quo (McMichael, 2009; Patel, 2021). This arrangement is entrenched in loans and complex capitalist financial arrangements enacted by the World Bank and International Monetary Fund (Patel). These dynamics subsume the ability of smaller producers to exert influence within the global system. Surprisingly, while the world produces more food than ever, hunger, malnutrition, and overnutrition increase for eaters throughout the world (FAO, 2020; Morgan, 2015). Problems like environmental and health impacts, excessive biofuel production, and diminished rights for agriculturalists are exacerbated by globally dominant agri-food businesses within the network. Large transnational food companies are dedicated to and influential in growing world market share and producing foods for this global system. Frequently, this prioritises food

production for export markets rather than feeding local eaters (Friedmann, 1993). The global power of some agri-food businesses makes it difficult for autonomous SSGs to compete and survive, even though most food in the world is grown by small-scale farmers (Zandt, 2021). Food produced and distributed in the global system through extended global commodity chains, limits space for locally-focused producers to carve a niche.

Encouraging and supporting SSGs who can sit alongside this system, however, provides scope to increase the availability of nutritious foods to local eaters which would potentially re-establish the caring and nurturing relationships of a holistic food system. SSGs, usually single-handedly, produce food in their backyards or on landholdings of less than three hectares for local sale and distribution. They provide a crucial regional function within a food system by providing short commodity chains as well as valuable social, cultural, and wellbeing outcomes balanced with economic outcomes as part of a moral economy¹. Activity at this local level reinforces the strength of a regional food network, contributing to food system resilience.

1.2 RESEARCH CONTEXT

According to the *United Nations* (UN), food is one of the top-ranked world issues (Pavlovich et al., 2021). Current food production and distribution practices can be seen as falling short, and projections by the UN suggest that eliminating world hunger and improving key food nutrition goals by 2030 will not be achieved (United Nations, n.d.). Vulnerable groups throughout the global north and the global south are likely to suffer the most, as has been identified by commentators and academics in communities around the world throughout the COVID-19 pandemic (Jackson et al., 2020; James et al., 2021). Tellingly, the *Food and Agriculture Organization* (FAO) of the UN calls for localised responses to providing food security, requesting nation-states to "keep the domestic supply chain gears moving, and support smallholder farmers' ability to increase food production"

¹ The term 'Moral Economy' was brought into academic use through the work of British political economist Edward Thompson in the 1970s to describe the value-guided morals used to push back against emerging economic unrest relating to the English 'food riots' in the mid-18th century. It requires application or consideration of values and caring practices within economic transactions.

(*Global Issues*, n.d., n.p.). The UN's view points to a need for change in the food system, and a requirement for "supportive food environments" and engagement with political-economic factors embedded in food (FAO, 2020, p. 66).

Change in the food system can be provided through Alternative Food Networks² (AFNs) (Dubois, 2018; D. Watts et al., 2005), such as Regenerative Agriculture³ (RA). To 'regenerate' means to improve or rebuild something, and a regenerative food system is recognised as going above and beyond the confines of sustainability. A regenerative system addresses inequalities and contributes to several SDGs, feeding an ever-growing global population. However, large transnational agri-food businesses called 'Big Food'⁴, dominate the existing food system and maintain their control through extended commodity chains that reinforce relationships and networks that continually reproduce the food system, creating geographic unevenness. Big Food food and beverage companies are able to exert substantial market power (Stuckler & Nestle, 2012), and generate anomalies through their commercialisation of food (Scott, 2018). These companies rule our global food system, "The world's food system is not a competitive market place of small producers but an oligopoly. What people eat is increasingly driven by a few multinational food companies" (Stuckler & Nestle, 2012, p. 1). The fungible goods they produce are linked to poor health outcomes due to their highly processed, high fat and high sugar content. Big Food has saturated markets in the global north and are pursuing rapid expansion into other markets, driven by marketing, investment and takeovers of domestic food companies. Such companies do provide the benefits of vast flows of foods throughout the world, continual economic growth, and reduced risk of undernutrition. However, undesirable impacts alongside environmental ones

² Alternative Food Networks are described by Watts et al. (2005) as a network that minimises involvement in conventional, multinational food supply chains. They identify the strength of short food supply chains and AFNs because they re-establish the local food sector in the face of increased scale, commodification, industrialisation, globalisation and transnational organisation.

³ Regenerative agriculture embodies a radical shift in agricultural production to mitigate environmental impacts, improve ecology, and improve social wellbeing. Farmers and growers work in holistic ways to improve what they produce and how they produce it.

⁴ Academics and commentators use the term 'Big Food' to label large transnational organisations that dominate all stages of the food system including trading raw materials, production, manufacturing, marketing, and all elements of marketisation. The term includes industrial scale agricultural companies such as Monsanto, DuPont, and Bayer who provide materials such as pesticides to the farming industry. The top 10 food companies according to the 2016 Forbes List are Walmart - US (40% of its sales are food); Anheuser-Busch - Belgium; Nestlé - Switzerland; PepsiCo - US; Unilever - Netherlands; Kraft-Heinz - US; Coca-Cola - US; Mondelez International - US; Danone - France; and McDonald's - US (Nestle, 2018).

include overnutrition⁵, and negative socio-economic impacts on farmers and domestic producers. In addition, these transnationals are effective at resisting public health responses, taxation, regulation, and influence over national governments (Stuckler & Nestle, 2012).

The global food system is underpinned by a free-market economy influenced by a neoliberal capitalist paradigm (Harvey, 2005; McMichael, 2012), which perpetuates a growth and profit-focussed ethos, as well as a focus on 'land grabbing' which McMichael describes as "symptomatic of a crisis of accumulation in the neoliberal globalization project" (2012, p. 681). The pervasive making and remaking of capitalist economies through food systems is described by Harvey, as a negative impact that spatialises those with or without resources – such as through the creation of food deserts, which are considered places where it is difficult to access healthy food such as fresh fruit and vegetables due to physical or economic barriers (Shaw, 2006). Harvey theorises that "one persistent fact [in the] complex history of uneven neoliberalization [is] the universal tendency to increase social inequality and to expose the least fortunate elements of society" (2005, p. 118). The socio-spatial construction of food commodity chains reinforces uneven economic development enabled through the homogenising effect of neoliberal practices (D. Watts et al., 2005) creating, as Beacham identifies, "a wide range of negative social, economic and ecological impacts" (2018, p. 536). Uneven development mirrors the findings of the FAO that food insecurity is experienced by both the global north and global south's vulnerable communities.

Despite being a significant food producer, food system shortcomings affect global north countries like Aotearoa. This is due to the country's focus on export markets and overseas eaters rather than prioritising local eaters, or meeting the externalities of production for export. In 2020/2021, Aotearoa exported 95% of its lamb and 86% of its beef, making red meat "New Zealand's second largest goods exporter, generating 15% of New Zealand's export revenue" (Meat Industry Association of New Zealand, 2020). In terms of dairy, New Zealand, "is the largest exporter of whole milk powder, with around 95 percent of the milk produced in New Zealand processed to be exported" (Granwal, 2022, n.p.).

⁵ Over nutrition means excess consumption of low-quality foods leading to obesity and other adverse health outcomes.

However, almost one in five New Zealand children (19.0%) live in households experiencing severe-to-moderate food insecurity in 2015/16 (Ministry of Health, 2019). In particular, food affordability was the primary factor for Māori and Pasifika populations who are most vulnerable, with children in those communities representing an additional level of vulnerability (Ministry of Health NZ, 2021). Alarming, Parnell et al., explain that "insufficient food does appear to be a more prevalent problem among adults in New Zealand than in Australia or the US" (2001, p. 144). These inequalities experienced by disadvantaged groups in Aotearoa are consistent with trends in "other rich liberal democracies" (Reynolds et al., 2020), and suggest the globalised food system is not working in everybody's favour despite the system's highly effective production and distribution network.

In contrast to global food companies, SSGs typically produce food for local consumption, growing and distributing food using AFNs. This focus allows for direct access to healthy food for local eaters, and an economic and social strengthening of local economies (Cameron & Wright, 2014; Tregear, 2011). Considering the volume of agricultural products grown in Aotearoa but exported overseas, understanding why food insecurity is evident here and how to keep New Zealander's well-fed nutritionally is essential. While recognising that AFNs cannot meet global food demand, they do provide fertile ground for investigating how localised food production can respond to anomalies in our food system at a local level.

1.3 LOCALISED REGENERATIVE FOOD SYSTEMS

A regenerative food system builds on RA to include the structural elements of a food system. Notably, such a system prioritises short commodity chains and direct relationships over transnational networks. Regenerative food systems also prioritise positive social outcomes, although this has not been fully explored in the existing literature. Food system failings were brought to people's attention during COVID-19 when shortages in distribution and supply encouraged people to reconsider their food sources and procurement. Increased local production is signalled as a way to rebalance the global food system, creating increased resilience to disruptions. In Aotearoa, the social benefit organisation *Pure Advantage* is advocating for RA to improve multiple outcomes around food

production and distribution. Millar says regeneration, " encapsulates the renewal, restoration and revitalisation of our natural systems to ensure we live within our natural planetary boundaries" ('Regenerative Future', 2020, n.p). Describing how our agriculture sector has benefited from climate and technology to maximise production, Millar says environmental and social harm has occurred:

This hacking of nature has allowed our ag sector to thrive economically, yet it has come at a cost to our environment, our waterways, farmer mental health, and the financial resilience of our rural communities, many of which are steeped in debt. ('Regenerative Future', 2020, n.p.)

Agriculture provides a platform for reimagining how we interface economically, socially and also environmentally with Tangata whenua, and how we value the mauri and wairua of our land, food, and people. Incorporating regeneratively-grown food provides scope for reversing environmental damage and changing the social, cultural, and environmental outcomes for eaters in Taranaki.

1.4 TARANAKI

Because of the topography of the region, Taranaki's settlements are dotted around the region's focal point of Mounga⁶ Taranaki, and a large number of SSGs operate in this region, producing regenerative food. This contrasts with the widespread modernised farming practices, and land uses that dominate the area. As geographers, we can utilise the concepts of materiality, meaning, and practice to articulate the land use, values, and connections of various groups such as tangata whenua, settlers, farmers, and SSGs in Taranaki. In addition, the assemblage and mobilities of food production by regenerative growers in Taranaki reveal place-making processes. These lenses will be utilised to study the role of growers in Taranaki.

⁶ The Taranaki mita uses the word Mounga rather than Maunga (Ngarewa, 2022).

The development of the dairying sector in Taranaki heavily influenced the region's history, physical geography, and sense of identity. As a stronghold of dairy farming, Taranaki provides a contrasting landscape for SSGs to operate within. Settlers in the 1800s transformed the landscape from dense native bush. The domination of European settlement and colonisation has complicated alternative opportunities from becoming established, reflecting power and ways of seeing the world, which is directly at odds with Māori as tangata whenua and the country's first settlers. As Brooking & Pawson describe, "the development of grassland farming undercut and erased indigenous places and livelihoods" (2007, p. 429).

The opportunity to undertake my research in Taranaki came about through involvement in a funded research project by Massey University. The focus of the PIVOT project was to research SSGs in Taranaki and their ability to provide regenerative food systems, create sustainable livelihoods, and develop thriving communities, therefore I chose to focus on social benefits I could see emerging during the PIVOT project.

1.5 RESEARCH OVERVIEW

Reflecting on the capitalist framework that underpins the global food system, DeLind poses the question, "shouldn't local eaters also ask, 'Why are we so totally concerned with consumers and not community members?'" (2011, p. 276). This highlights an inclination to focus on economic relationships ahead of the feeding and wellbeing of our communities which are left insecure under the existing framework. Most research on localised food production focuses on economic outcomes and market potential in relation to food system reform, rather than looking at the social outcomes and potential that regenerative food systems might strive for as an alternative (DeLind, 2011).

Mindful of De Lind's (2011) advice for productive reintegration of local food I decided to focus on social outcomes of localised food. I looked at how this could support a regenerative food system in terms of economic, cultural, interpersonal, and democratic power for a community, and how these can be structurally represented within a relational meshwork. I propose that creating a resilient and

regenerative food system locally builds social connections and relationships based on care for people and the more-than-human world. It does this through the growing and sharing of regenerative food, which encourages high labour inputs, prioritises wellbeing ahead of financial return, operates at small scales (under three hectares usually), creates localised marketplaces, and provides a diversity of produce. A regenerative system can also be a part of an improved global food system through its focus on regenerating the environment and communities.

This thesis examines the social impacts of local growers who prioritise growing and distributing regionally produced food, contributing to positive and diverse socio-economic outcomes. My research will explore the extent to which Taranaki's small-scale growers provide an alternative and caring localised food source. By identifying their production and distribution practices within a meshwork, I will be able to illustrate whether short commodity chains, diverse alternative marketplaces, and a range of caring values that resocialise food is possible.

1.6 THESIS STRUCTURE

The current chapter outlines the research proposed, introducing some of the complicating problems of our global food system and suggesting what a regenerative food system can do to alleviate these challenges. A proposition that SSGs can resocialise, create diversity, and positive socio-economic outcomes through a localised regenerative food system has been articulated, and the site of the study is briefly introduced. In Chapter Two, a range of food geographies relating to the work of SSGs are explored to help us understand the structuring and ordering of the global food system. I consider AFNs, regional food production and related topical issues of food security and food sovereignty. The chapter looks at AFN theories such as RA, and values-based theories which highlight an ethic of care, and concludes by utilising meshwork theory as a way to depict the activities and reach of SSGs in Taranaki.

Chapter Three outlines my research methodology, identifying ethnography as a suitable approach for working with Taranaki's SSGs. The work of Watson and Till

(2010) and Ouma's (2015) ethnographic work on agri-food chains influenced my approach. I identify the distinction between research work undertaken for this thesis and the related PIVOT project I was involved in. In Chapter Four, I provide an overview of the Taranaki region's physical geography, history, environment, cultural, social and economic characteristics. Following that is a short history of farming in the region and the value of this sector to the region. This chapter provide a basis for understanding where a caring, regenerative food system sits in relation to modernised, productive models of food production.

Chapter Five introduces the research participant SSGs, as well as presenting four vignettes that showcase key examples of caring practices as they emerged from my ethnographic research. In Chapter Six, I draw together my findings and discuss these within the context of my care theories to summarise the practices of localised, regenerative small-scale growing in Taranaki. These are discussed in terms of depicting those practices within a local meshwork alongside and in response to a globalised food system.

To conclude my research, in Chapter Seven, I consider my research findings in relation to the context of food system weaknesses and the proposed care literature. I identify the social impacts that Taranaki's SSGs can bring to localised food production and consider what promise this offers to the production and distribution of food to Taranaki eaters.

CHAPTER 2: FOOD GEOGRAPHIES – LITERATURE REVIEW

*“With a long tradition of engaging with social, political and economic inequality, geographers can offer valuable insights into struggles over access to healthy food, and struggles for food justice more broadly”
(Heynen et al., 2012, p. 304).*

2.1 INTRODUCTION

My critical literature search terms were food regime theory, global food systems, and commodity chains, as these texts capture key aspects of food production and distribution. The following literature review is accompanied by academic and contemporary dialogue on food security and food sovereignty which has particular relevance for Aotearoa due to the topical nature of food system problems identified in the previous chapter. By considering the food geographies discussed below, I have become aware of the challenges of Big Food, transnational food supply chains, globalisation, diet and nutrition anomalies, and many other environmental, social and economic imbalances within our food system. These shortcomings require reconsideration of the structures and processes organising the current system socially and economically. I look at AFNs such as RA, which I discuss in detail due to its relevance to the growers' approach to food production in Taranaki. Of note is a gap in the literature about the socialising⁷ capacity of food (Beacham, 2018). Read together, this literature in food geographies focuses on how agri-food has become organised and subject to globalisation and industrialisation, creating a range of social impacts.

I am motivated to reconsider social relationships and possible impacts in localised places of food production. By looking at scales of production and flows of produce, a space for AFNs to operate will be considered. To address this, I have identified the theories of moral economies, diverse economies, and in particular an ethic of care as useful for assessing the social relations of a local food system. In addition, I draw on the work of Carlisle (2015) who discusses meshwork theory in relation to food systems. I identify and consider how SSGs are resocialising food at a regional level, putting social considerations in

⁷ In looking at the 'socialisation' potential of food systems, I consider the notion of social as encompassing economic, political, cultural and relational aspects.

conversation with geographical concepts of space and place. These theories enable me to examine whether Taranaki's regenerative SSGs operate within and contribute to a caring food system.

2.2 BUILDING BLOCKS OF FOOD SYSTEM STRUCTURES

2.21 Food Regime Theory

Geography expresses patterns and processes of food production and distribution as food regimes, which Pritchard describes as "a framework to explain global-scale reconfigurations of the world food order..." (2009, p. 221). In geographical terms, food regimes are recognised in relation to their relevance to world economic and political systems (Araghi, 2003; Pritchard, 2009). Global food regimes provide an historically driven economic and political framework that explain critical driving forces in the organisation of agri-foods. However, food regimes have been somewhat superseded by a focus on commodity chains, post-productivism, and post-structural political economies, as well as the agency inherent in the current global network (Roche, 2012).

Food regime theory was defined and championed by Friedmann and McMichael in 1989. This theory documents historical shifts in agriculture and food organisation worldwide from the late 19th century, identifying it as embedded within a capitalist system (McMichael, 2009). Their work demonstrates the structured relationships and complexities of agri-food economics and politics, highlighting international divisions of labour, and systemic change, particularly between nation-states and the international neoliberal political economy of agri-foods.

In the first regime, Friedmann describes the formation of a world wheat market. Market demand was linked to the emergence of new classes of waged workers in Europe, and to European settlers who colonised the Americas, Australia and New Zealand in "territories made available through expulsion of native peoples" (Friedmann, 1993, p. 218). The global market expanded to a point of crisis and destabilisation, which demarcated the emergence of a second food regime. In this regime, capitalist enterprises were substantially protected by regulations and trade protections, which drove the growth of agri-food businesses and power

beyond that of state economies (Friedmann). The ensuing processes of globalisation and industrialisation have separated eaters from the origin of their foods, which has systematically changed the social relationships between growers, food, and people (Friedmann). Friedmann comments, "rather than export their **surpluses** [emphasis added], the export imperative reorients local production to shifting foreign needs... within the framework of the self-regulating market system, local markets and craft preservation are luxuries, and their prices reflect the change [in market orientation]" (1993, p. 220). Of relevance to Taranaki is the continuing drive of farmers to export produce rather than supplying local markets first.

A third regime was proposed by McMichael (2012), as a corporate food regime whereby agribusinesses operating under the rules and protections of the World Trade Organisation (WTO) and US-centred mercantile practices evolved into larger and more powerful organisations controlled by fewer people. These businesses favoured industrialised production process and technological 'fixes' to problems within the global food system. As part of a restructuring of capitalism, Friedmann (2005) conversely suggests that a corporate-environmental food regime has emerged, and combined with food safety and welfare considerations, agri-food businesses are 'greening' their operations to "allow for renewed accumulation of capital" (2005, p. 228). However, there is significant discussion about the value of food regime theory (Goodman & Watts, 1997) and debate as to whether a successive regime has started and even finished.

Yet, Friedmann (1993) points out that despite farms becoming subordinated to agri-food industries, which is the majority case for Aotearoa's farming sector, some people are trying to reconnect the regional component of agri-food relations. Central to this regionalisation approach is a focus on diversity, sustainability, and local consumers. This focus is helpful for my consideration of alternative caring food systems and is picked up in my discussion further below.

2.2.2 Global Food System and Commodity Chains

The global food system, sustained by modernised agriculture, provides huge quantities of fungible goods and durable raw food components. This connected global system dominates food production worldwide and is exceptionally efficient at producing and distributing large quantities of food around the globe.

Goods are transported great distances through supply chains, or commodity chains, and stored indefinitely. Underpinned by economic infrastructure, commodity chains are not bound by national territories and cross borders, taking on power beyond traditional, imperial or westernised views of state power (Agnew, 2015). Aotearoa's most significant dairy export is milk powder (Granwal, 2022).

Illustrating the scope, scale, and influence of the network of food chains, Fold & Pritchard (2005) explain how foodscapes reflect the global political relations of the current age. Food commodities are traded in complex networks that connect groups, organisations, and regions across the globe. These exchanges can be traced along commodity chains, with the network that these chains form indicating a dynamic social and economic organisation of relationships between various entities (Gereffi & Korzeniewicz, 1994). Many commodity chain relationships are vertically organised reinforcing power relations between food companies and farmers (Le Heron et al., 2001). Illustrating the dominance and transnational nature of commodity chains, Le Heron et al. say the WTO is subjecting agricultural producers to "global sourcing strategies of agribusiness corporates", requiring national policy adaptation and interventions to respond (2001, p. 441).

The result is a global food system that moves food commodities across the globe in transactions and processes that create stable export roles and market sites worldwide. Global interconnectedness reflects the end of an era of state intervention, establishing the world as a single social space (Hall et al., 1992). However, the nature of that 'social' space is influenced by the forces of the global food system rather than the balanced social norms of a community (Carlisle, 2015). Despite this, many agri-food businesses and supermarket chains are keen to meet the needs of conscious consumers by providing organic produce or Fairtrade options alongside their regular provisions (Pritchard, 2009).

The increased complexity and financialisation of commodity chains, allied businesses, and outsourcing of niche processes, demonstrates 'supply chain capitalism'. In terms of agriculture within the global economy, farmers have limited control of their products and are at the mercy of Big Food infrastructure and policy, utilising supply chain management as an economic tool (Busch,

2007). This further embeds the global framework of commodity chains in food provisioning (Tsing, 2009). In Aotearoa, our key exports are tied into these transnational economic relationships as processed agri-food products. Therefore, SSGs operating at a regional level have reduced scope to work within or influence that system (Dahlberg, 1993; D. Watts et al., 2005).

The food system is stabilised through a range of tariffs and subsidies, particularly in global north countries, and the liberalisation of rules around foreign direct investment encourages consolidation of the private sector into fewer hands globally (Godfray et al., 2010). Another factor in the stabilisation of the global system is the process of globalisation which has arisen through cheaper labour, raw materials, technology, transport and communications. This leads to a convergence of pricing, production, and services, which can sometimes bring about "convergence to the point of homogenization" (Belich, 2007, n.p.), and can also create a loss of produce diversity

2.3 GLOBAL FOOD SYSTEM ANOMALIES

There are many anomalies in the global food system, such as imports of cheaper foods which can displace local farmers, "eventually forcing them to leave the land when they can no longer compete and are not able to make a living from farming" (La Trobe & Acott, 2000, p. 312). While consumers may benefit short term through availability and standardised prices, growers and farmers can suffer through the loss of livelihoods, and the environment may suffer through over-extraction and polluting practices.

There are also social and community impacts from disenfranchisement of growers and separation of eaters from their food sources. Scholars frequently identify hegemonic global capitalist markets as the stimulus for anomalies in the food system (DuPuis & Goodman, 2005; James et al., 2021; Magnan, 2012; Pritchard, 2009). For example, La Trobe & Acott find that, "the economics of 'comparative advantage' governs which country will produce which foods" further entrenching production, processing, and distribution (2000, p. 309), and reducing autonomy for food producers resulting in less choice for eaters. While agribusinesses and supermarkets can demonstrate how they meet consumer

demand, they also have significant power to influence consumer choice demand (James, 2016).

Despite the effectiveness of the food system at producing and distributing relatively affordable produce and goods, inequalities are prevalent in both the global north and south. These are experienced as food deserts⁸, malnutrition, starvation, overnutrition and loss of smallholder rights and indigenous practices (Morgan, 2015). These are problems with multi-faceted components. As Godfray et al. point out, "the food system is complex, with dynamics determined by a combination of physical, biological and socio-economic processes" (2010, p. 2775).

Financial and political arrangements underpinning the global system are capitalist in nature. Harvey describes pervasive and continued making and remaking of capitalist economies stating, "one persistent fact [in the] complex history of uneven neoliberalization [is] the universal tendency to increase social inequality and to expose the least fortunate elements of society" (2005, p. 118). This is the economic reality at the heart of the global food system and a crucial reason why critics call for alternatives or a modification of the global food system (D. Watts et al., 2005). In particular, commentators such as the UN talk about food security and food sovereignty requirements, which highlight the impacts created through commodity chains and the global food system framework.

Global food systems can create a range of undesirable outcomes. For example, production and distribution of food globally does not often adequately account for externalities in its production and distribution. One example is extensive monoculture cropping of maize, soybean and corn, which has developed in some countries. Monocultures can appear highly productive when measured through conventional economic measures but are dependent on fossil fuels and inputs such as water and chemical fertilisers such as NPK⁹. This approach to cropping can reduce resilience or adaptivity and is not environmentally

⁸ Food deserts are considered areas of "relative exclusion where people experience physical and economic barriers to accessing healthy food" (Shaw, 2006, p. 231). This can occur due to a variety of factors including economic, geographical, psychological and sociological.

⁹ NPK is a fertiliser comprised of nitrogen, phosphorus and potassium.

sustainable (Dahlberg, 1993). Many of these impacts can be framed as challenges to food security and food sovereignty which undermine the ability for communities to protect the local production of healthy reliable sources of food for themselves.

2.3.1 Food Security and Food Sovereignty

Within a food system, the terms food security and food sovereignty are important for understanding the need for AFNs and practices of care in food. Food security focuses on access to food and consistency of supply, while food sovereignty embraces social justice concepts. Sovereignty includes the right of access to particular foods, rights for consumers and producers, and is also ecology-focused, ultimately seeking to transform food systems through economic and political levers (FAO, 2020; Hopma & Woods, 2014; Patel, 2009; Trauger, 2014). Both terms are important to consider when evaluating AFNs as they cover vital perspectives on access and equity, which are relevant in Aotearoa.

Food security and sovereignty are experienced differently in the global north and south, and some question its relevance in wealthy democratic states. For example, Hopma & Wood (2014) suggest that food sovereignty in America is directed towards community choice and local control. In contrast, food sovereignty in global south countries relates to the plight of vulnerable peasant farmers and threats to indigenous food practices and native species. In Aotearoa, food insecurity is measured in terms of foodbank use and adverse health outcomes, with connections formed between food insecurity and social inequality. Economic status and neoliberalism are a causal link in the economic marginalisation of specific communities, creating inequality and 'vulnerability' to food insecurity (Reynolds et al., 2020).

While food sovereignty can be a catchall for many distinct agendas and activities (Fladvad, 2019; Jarosz, 2014; Patel, 2009), it challenges the organisation of the global food system and champion principles of "rights and social justice over economics and technology" (Hopma & Woods, 2014, p. 773). In this way, food sovereignty is a fundamental goal for food systems that prioritise an ethic of care by creating and developing AFNs. A focus on sovereignty is attributable to food security failures and is being addressed at global levels through *World Food Conferences* and the *UN's FAO* (Trauger, 2014). Food sovereignty has an

embedded radical social justice agenda that is exceedingly rights-based at an individual and collective level. It seeks to empower people, particularly those connected to food production. As a concept and movement, it is horizontal and decentralised (Hopma & Woods, 2014), which seeks to reallocate power to vulnerable groups in balance with transnational agri-food businesses endemic to the global food system. These debates have resurfaced under COVID-19. The pandemic brought food security and food sovereignty back into focus as people took greater control of their food, and sought access and equity of food provision (James et al., 2021).

A key issue for food sovereignty scholars is the assembly of food systems, and the production of cheap food and fungible commodities, which Trauger says, "keeps consumers separated socially and geographically from the places of food and commodity production, effectively making them ignorant of and disconnected from production practices" (2014, p. 1135). Acknowledgement of the separation people have from the food they eat contributes to McMichael's concept of food from nowhere versus food from somewhere (McMichael, 2016). This has been fuelled by global industrial agriculture which creates "a systematic 'placelessness', and that place has a role in the building of alternative food systems" (DuPuis & Goodman, 2005, p. 360). Importantly, Fladvad (2019) says AFNs can create new consumer-producer relationships, such as reconnecting food to its place of origin and the related elements of how and who it has been produced by.

2.4 FOOD FROM SOMEWHERE - ALTERNATIVE FOOD OPTIONS

2.4.1 Alternative Food Networks (AFNs)

AFNs frequently operate within local spaces and are often typified by short supply chains. Local production and consumption is key to mitigating impacts such as food miles, and therefore a priority of AFNs. Reinforcing this, Watts et al. (2005) argue for a 'relocalization' in response to an extended period of 'delocalization' or agricultural industrialisation and productivism within global networks, suggesting that shortened food supply chains are beneficial for reducing environmental impacts, maintaining diversity of produce, and supporting smaller structures of production.

These alternative models of agri-food production can resist and counter impacts of industrial food corporations and transnationals or, work alongside mainstream food corporates by creating new spaces and places of production and consumption that focus on social and environmental outcomes. While they are not currently in a position to compete with global agribusiness, AFNs are able to valuably contribute in a complementary way. Carlisle recognises AFNs as striving to create additional options, "rather than reforming mainstream agribusiness, AFNs seek to provide a viable alternative marketplace grounded in a broader notion of value that includes non-monetary goods" (2015, p. 1). Value, to SSGs looks different when compared to values sought by mainstream commercial growers. In these alternative spaces, practices of care can occur, incorporating interpersonal relationships in a more-than-human world, such as an ethic of care expressed towards soil, livestock, and the environment (Beacham, 2018). Within an alternative network, humans can be decentralised from hierarchical positions of power, and horizontal connections can mesh, creating a web of social connections rather than a transactional chain of production.

Common AFNs include organics (Rodale Institute, n.d.), permaculture, civic agriculture¹⁰ (Lyson, 2004), RA (Rodale Institute, n.d.; Soloviev & Landau, 2016), cooperatives, and direct-to-consumer models which typify this sector. These AFNs promise increased accountability and responsibility, less corporatisation and industrialisation. AFNs accommodate a variety of social impact choices and reduce involvement in conventional, multinational food supply chains (Beacham, 2018; Carlisle, 2015; Goodman et al., 2012; D. Watts et al., 2005). These features are important for reducing the centralisation and homogenisation of agricultural commodity markets as preferred in global food systems and by many consumers. Matching the values and aims of some the SSGs I researched for this thesis, civic agriculture, for example, embraces community-based food production and distribution. Lyson says this provides local fresh food, which creates jobs, encourages entrepreneurship, and strengthens community identity, "offer[ing] consumers real alternatives to the commodities produced, processed, and marketed by large agribusiness firms" (2004, p. 2).

¹⁰ Civic agriculture includes people-focused, locally-focused, production and short supply chains. This increases people's role within a food system generating 'food democracy' (fairness between producers and consumers) and food sovereignty (Lyson, 2004; Renting et al., 2012).

AFNs allow communities to be directly involved with food choice, which "go[es] beyond material and economic exchange... contribut[ing] to a 'moralization' (or even 'civilization') of food economies" (Renting et al., 2012, p. 289). Direct engagement by consumers through initiative likes consumer cooperatives, buying groups, and community-based urban gardening resocialises engagement with food production (Renting et al., 2012). This connection is important as "people have lost more and more control over the source and quality of their food and have become increasingly distanced from food practices and knowledges" (Allen, 2010, p. 296). Alternative approaches ultimately improve social and environmental outcomes:

Citizen-consumers, in collaboration with 'citizen-producers', actively reshape their relations with different stages of the food system and start revaluing the (social, cultural, environmental) meanings of food beyond mere commodity and object of economic transition. (Renting et al., 2012, p. 290).

There are also recognised limitations to AFNs, such as questions regarding how scientifically proven concepts such as RA are (AgScience, 2020) and how testable and accountable these methodologies are (Carlisle, 2015). Lyson (2004) acknowledges limitations of civic agriculture, explaining it does not currently represent an economic challenge to the conventional agri-food business sector. However, there are two schools of thought. Firstly, whether AFNs are responsible for restructuring the global food system, or whether AFNs merely need to create viable alternative options. I see the latter creating an advantageous entry point for a change in agricultural practises and values, as well as increasing local resilience through local food production for communities.

The geographic concept of 'place' is intrinsic to food systems and can describe where and how social relationships exist. Locally-based economic forms of production and consumption encouraging or prioritising equity can be created, but Allen highlights that "demographic disparities can be inadvertently reproduced in food-system localisation efforts, particularly those that are market based" (2010, p. 300). AFN sites and activities such as Farmers' markets and

community supported agriculture can become the domain of white middle-class participants, excluding others (Allen, 2010; Slocum, 2007). We cannot assume that local spaces of food production are automatically places of worth, "the local site is often a site of inequality and hegemonic dominations," therefore DuPuis and Goodman encourage us to look for food sources, "that pay attention to equality and social justice" (2005, p. 359).

Duell (2013) refers to the colonial histories of racially divided communities citing Guthman's work in the United States. Guthman (2008) discusses the assumption that those who are not choosing farmers' markets are not sharing the 'right' values and knowledge about the benefits of eating locally produced food. Many farmers' markets are frequented by relatively privileged shoppers who can afford to purchase food produced explicitly for, and distributed, at these sites Duell (2013).

Nevertheless, some growers and eaters want to participate and choose alternative food systems founded in relationships based on care and that provide a high degree of self-autonomy. Also important is a system where exchanges are equitable for all parties and entrenched in respect and a commitment to address food insecurities (Carlisle, 2015; Johnston, 2021), and a lack of food sovereignty (Duell, 2013). Veen and Dagevos discuss how the work of SSGs are sites of local food production, whereby "people voluntarily share skills and labor, based on intrinsic, more-than-economic motives and including values such as social relations and communality" (2019, p. 2). Within AFNs these practices and approaches find their purpose.

2.4.2 Regenerative Agriculture and Regenerative Food Systems

I have focused on emerging RA literature, which reflects the values and practices of Taranaki's SSGs. Advocates frequently avoid defining RA, focusing instead on outcomes and practices that contribute progressively to the regeneration of agricultural ecosystems (Grelet & Lang, 2021; Newton et al., 2020). However, not setting a definition creates difficulties in articulating, analysing, or measuring the benefits or productivity of RA, and it also complicates epistemological understanding (Newton et al., 2020). In practice, the New Zealand agricultural sector is divided in its opinions on the applicability of RA particularly in terms of commercial large-scale farming operations (AgScience, 2020). Relevant

academic research is starting to emerge, therefore the best definitions of RA come from practitioners themselves. Long-held in high regard for their work in the organics sector, the *Rodale Institute*¹¹ is considered the pioneer of the term RA. Rodale coined the term "regenerative organic" to describe a holistic approach to farming that encourages continuous innovation and improvement of environmental, social, and economic measures. Importantly, this definition embraces the social and relational qualities of a regenerative approach:

The number one priority in regenerative organic agriculture is soil health. Soil health is intrinsically linked to the total health of our food system. Soil health affects everything from plant health to human wellbeing and the future of our planet. Regenerative prioritizes soil health while simultaneously encompassing high standards for animal welfare and worker fairness. The idea is to create farm systems that work in harmony with nature to improve the quality of life for every creature involved. (Regenerative Organic Agriculture, n.d., n.p.)

Terra Genesis International also analyse and define RA. As an American service-based corporate, *Terra Genesis* advocates for RA based on their own research and experience. *Terra Genesis's* shortened definition of RA is identified as follows:

Regenerative Agriculture is a system of farming principles and practices that increases biodiversity, enriches soils, improves watersheds, and enhances ecosystem services. Regenerative Agriculture aims to capture carbon in soil and above ground biomass, reversing current global trends of atmospheric accumulation. At the same time, it offers increased yields, resilience to climate instability, and higher health and vitality for farming and ranching communities. The system draws from decades of scientific and applied research by the global communities of organic farming,

¹¹ Robert Rodale, of the *Rodale Institute*, developed the institute as an independent working research farm. He previously defined organics and championed the regenerative organics movement through scientific research and practice over 70 years.

agroecology, holistic management, and agroforestry. (Terra Genesis – Cultivating Transformation, n.d., n.p.)

Terra Genesis challenge farmers to appreciate how agricultural landscapes can improve ecosystems and communities (Soloviev & Landau, 2016). Importantly, they make a distinction between sustainable methods, which merely maintain current levels of environmental impact. RA, they state, focuses on reversing harm and making marked improvements. It is a strategy that can aid carbon sequestration and mitigate climate change whilst also enabling adaptation to climatic impacts and improved human wellbeing, although this final element is less well-considered by academics and practitioners.

A peer review of academic definitions by Schreefel et al. (2020) is useful in its comparison of different perspectives on RA, identifying common objectives and activities of RA (see Table 2.1).

Regenerative Agriculture Objectives	Regenerative Agriculture Activities
<ul style="list-style-type: none"> ▪ Regenerate the system ▪ Reduce environmental externalities ▪ Improve the ecosystem ▪ Improve human health ▪ Improve economic prosperity ▪ Enhance and improve soil health ▪ Optimise resource management ▪ Alleviate climate change ▪ Improve water quality and availability ▪ Improve (soil) biodiversity ▪ Improve soil carbon ▪ Improve soil physical quality ▪ Improve nutrient cycling 	<ul style="list-style-type: none"> ▪ Minimise external inputs ▪ Mixed farming ▪ <u>Minimalise</u> tillage ▪ Crop rotation ▪ Use of manure and compost ▪ Use of perennials ▪ Other soil activities

Table 2.1: Summary of Regenerative Agriculture Objectives and Activities – adapted from Schreefel, Schulte, de Boer et al. (2020, p. 3).

Schreefel et al. found that social and economic objectives were divergent from environmental ones and did not feature specific goals to achieve, for example, long-term economic viability. Beneficially, this stimulated my research exploring the social aspects of regenerative food production and distribution. Encapsulating the approach of the SSGs I studied, Schreefel et al. (2020) provide the following aggregated definition of RA:

An approach to farming that uses soil conservation as the entry point to regenerate and contribute to multiple provisioning, regulating and supporting ecosystem services, with the objective that this will enhance not only the environment but also the social and economic dimensions of sustainable food production. (p. 5).

Importantly to this thesis, Schreefel et al.'s work embraces the concept of RA not as an end in itself, but as "embedded in the transition towards a **regenerative food system** [emphasis added]" (2020, p. 2). This notion of a regenerative food system has been embraced throughout my research and thesis because the principles of regeneration relate to all aspects of a food system, not just agricultural practices.

Regenerative food systems focus on regenerative processes and cycles, which are ecological and evolutionary (Dahlberg, 1993). They differ from linear networks that reflect our current capitalist economic growth and production-focused model. Regenerative systems are complex, resilient and adaptive natural systems, whereas industrial systems substitute diversity and complexity for monocultures in complex arrangements of transportation, processing, production, and redistribution (Dahlberg, 1993).

Regenerative systems consider production and economics similar to a conventional system. However, they also include ecological considerations, ethics, and equity (Dahlberg, 1993). Table 2.3 demonstrates differences between a dominant global food system and the alternative, a regenerative food system. Many of the goals and values expressed for alternative positions on the right-hand side of the Table align with the values and socialisation of food that Taranaki's SSGs I met are working towards. He explains:

Household gardeners - whether on the farm or in the city - produce food and are part of household food systems but are not seen as part of agriculture - which focuses on the production of commodities on farm fields. The roughly \$18USD billion worth of vegetables and fruit produced

each year in household and community gardens are largely ignored (Dahlberg, 1993, p. 82).

This home-based productivity is part of the informal economy and is an essential component of how the world feeds itself. Dahlberg (1993) says very little research and theory around understanding the food system exists at a household or neighbourhood level. I suggest that this work is required to understand the role of regenerative SSGs within this context.

GOALS HELD BY DOMINANT AND ALTERNATIVE GROUPS				
Group/Level Involved	Dominant Positions		Alternative Positions	
	Goals (Professed and/or Operative)	Underlying Ethics and Values	Goals (Professed and/or Operative)	Underlying Ethics and Values
Farmers	Family support	Rural conservatism	Family and community support	Family/group self-reliance
	Make money, have a high standard of living	Individualism		Rural community
	Produce more through specialization by crop/commodity		Diversified farming/homesteading	Integrated way of life
	Stewardship of the land	Love of nature	Conservation of energy, soil, and local species	Harmony with nature
	Fighting world hunger	Moral concern	Social justice	Moral concern
Agriculture as a sector	Increased production	Corporate and market economy	Having nutritious/healthy food	Informal and cooperative approaches
	Stable prices and markets domestically		Sustainable production	Regenerative systems
	Expanding foreign markets		More local and regional markets (formal and informal)	Local and regional self-reliance
	Profitable operation		More small farms	Voluntary simplicity
	Specialization by commodity		Farm and regional diversity	Recycling systems
National	Increased production	Economic growth	Having nutritious/healthy food	Sustainable economic growth
	Cheap food	Science and technology linked to progress		Respect of nature and ecosystems
	Foreign exchange and aid	National power	Rural revival	Cultural and personal contentment
	Industrialization of agriculture and urbanization		Rural revival and decentralization	
International	Elimination of hunger (through trade and aid)		Elimination of hunger (through local production)	
	Agricultural development	National sovereignty/planning	Rural and ecodevelopment	A globe of villages
	Economic development	Expanding international markets and trade	Cultural development	Greater autarchy
Global	Balance between food, population, and resources	Western	Balance between food, population, and resources	Recessive Western plus non-Western
		Anthropocentric	Conservation of genetic and biological diversity	Inclusionist

Table 2.2: Goals Held by Dominant and Alternative Groups (Dahlberg, 1993, p. 78).

Typically, the social aspects of RA are expressed as an outcome of wellbeing from producing and consuming regenerative food, but there is very little evidence of the social impacts of a regenerative food system. In the next section,

I consider theories which examine the capacity of regenerative food systems to create social impacts.

2.4.3. Caring Food Systems

The following literature discusses how an ethic of care can be applied to food systems. The need for care and the resocialisation of food, is seen by theorists and practitioners as a key function of an AFN. Giraud suggests in relation to permaculture:

By putting 'care' at the core of its practice and moral principles, by including emotions and attachment in decision-making, by recognizing that humans and ecosystems are primarily relational, and by offering alternatives to an oppressive agricultural system, permaculture is an ethics of care. (Giraud, 2021, p. 55).

The work of Carlisle (2015) integrates moral economies¹² with AFNs and explores values which are prioritised ahead of the traditional economic features such as productivity and growth. This can be seen in the way that AFNs, "redistribute value through the network against the logic of bulk commodity production" (Whatmore et al., 2003, p. 389), as well as reconvening trust between producer and consumer and the creation of new forms of political association and market governance (Whatmore et al., 2003). Several academics have taken up the advancement of caring values as a resistance to the global food system issues outlined in 2.3. An ethic of care approach is viewed as a means of countering the individualising tendencies of neoliberalism, through the actions outlined below. Seminal work on care by Tronto (2015) provides an established framework that can be applied to my research to help provide insight into the levels of care that can be detected or evidenced by the work of SSGs.

Importantly, Tronto's work identifies that, "the ethic of care is a practice, rather than a set of rules of principles" (Tronto, 2015, p. 126). She argues that care is embedded in social life, which puts moral ideas into action. Her work defines four

¹² Moral economy literature encapsulates the rights and responsibilities we have within society and highlights the inequalities and hierarchies of capitalist societies (Morgan, 2015). A moral economy focuses on "moral rules, social values, and ties of obligation" (Naseemullah, 2020, p. 187), but also ethical considerations for the more-than-human, such as soil, plants, and animals. Evolving from peasant studies and with a solid political and economic origin, a moral economy reclaims the power and rights of people in balance with traditional expressions of societal norms and values.

ethical elements of care: attentiveness, responsibility, competence, and responsiveness.

- I. **Attentiveness** refers to being tuned into the need to care for the environment, care for farmers, and care for vulnerable groups. "We have an unparalleled capacity to know about others in complex modern societies. A lack of attentiveness suggests the idiom 'out of sight, out of mind', and could describe how we feel about where commodities or food comes from and how the commodity or food was produced. For Taranaki's SSGs, knowing and valuing where and how food is produced is central to their kaupapa. Their hands-on approach and intimate scale of production allows them to be especially attentive to food growing and their eaters and communities.
- II. **Responsibility** describes a dimension of care that is a central moral category. Things we do or do not do, whether individually or collectively, contribute to a need for care; therefore, we have a responsibility to care. For example, Aotearoa's farming sector, primarily exporting premium dairy and meat to distant eaters, influences the country's quantities, quality, or food price. The question is raised therefore, 'Does New Zealand's farming sector have a responsibility to provide fair access and equity to all New Zealanders?'. This sense of responsibility is something that Taranaki's regenerative SSGs have prioritised. They take responsibility for improving ecosystems and increasing social justice.
- III. **Competence** refers to the requirements for an ethic of care to be actioned and put into effect. Some would argue that globally, many agribusinesses are concerned about sustainability, caring for farmers and workers, and the wellbeing of local communities. For example, Fonterra says on its website, "We're committed to producing dairy nutrition in a way that cares for people, animals and our environment, and brings value to our communities" (*Embracing Sustainability*, n.d., n.p.). However, equally, some businesses worldwide merely pay lip service to the 'greening' of their operations. At the same time, some transnational businesses starting to adapt components of their operations to provide an ethic of care. In Taranaki, the SSGs are seeking to provide this competency by caring for soil, plants, animals, the wellbeing of

themselves, eaters and their local community within their regular daily practices.

- IV. **Responsiveness** this element concerns itself with the responsiveness of the care-receiver to the care. This highlights those that require care and how practices of care are extended to certain people, groups or the more-than-human. Tronto says, "care is concerned with conditions of vulnerability and inequality" (2015, p. 134). Therefore, it is necessary to protect the vulnerable, protect the person providing care, and to be attuned to where inequalities exist. This attribute is a key driver for many SSGs who focus on the needs of eaters through the direct social connections they create.

Tronto cautions against thinking of needs in a commodified way, which she argues "obscures the processes of care necessary to meet needs" (2015, p. 138). AFNs achieve this as they can be shown to operate within a moral economy. Therefore, I propose that SSGs can enable care through the shorter food chains their meshwork offers, meaning there is usually a direct relationship between grower and eater, enhancing the ability to practice care.

In line with moral economies and an ethic of care framework, diverse economies also provide important insights into the work of AFN. Gibson-Graham's oeuvre of diverse economies literature evolved into a consideration of how to embrace new ontological opportunities alongside the dominant capitalist system of economic transactions. These include tracing out the places of transactions such as gifting, exchanging, or cooperative arrangements (see Table 2.1) rather than just capitalist forms of exchange. While these means of exchange are evident in our society today, they are often devalued and overlooked. My research aimed to identify these ways of operating, and underscore the importance of the value they generate beyond monetary value.

Transactions	Labour	Enterprise
Market	Paid	Capitalist
<p>Alternative market</p> <p>Sale of public goods Ethical 'fair-trade' markets Local trading systems Alternative currencies Underground market Co-op exchange Barter Informal market</p>	<p>Alternative paid</p> <p>Self-employed Cooperative Indentured Reciprocal labour In kind Work for welfare</p>	<p>Alternative capitalist</p> <p>State enterprise Green capitalist Socially responsible firm Non-Profit</p>
<p>Non-Market</p> <p>Household flows Gift giving Indigenous exchange State allocations Gleaning Theft, poaching</p>	<p>Unpaid</p> <p>Housework Family care Neighbourhood work Volunteer Self-provisioning care Slave labour</p>	<p>Non-Capitalist</p> <p>Communal Independent Peasant Feudal/ Slave</p>

Table 2.3: Diverse Economy Framework (Gibson-Graham, 2008, p. 616)

Of relevance to my research is Veen and Dagevos's explanation of how Gibson-Graham's diverse economies show a "resocialising of economic relations" (2019, p. 2). They describe the agenda of Gibson-Graham's work as bringing ethic, care, and social relations into our understanding of everyday, domestic economic transactions. This builds on the relational notion of moral economies and an ethic of care described above. By using diverse economy literature within my research I was able to identify a range of economic activities that provide alternatives, rather than attempting to end the "dominance of mainstream capitalist economies" (2019, p. 2) .

Finally, I consider the value of meshwork modelling (Pavlovich et al., 2021) for capturing the relational connections between growers, food, and eaters. This provides a valuable tool to identify visually the sites and impacts of production, distribution, and consumption within a localised area (Pavlovich et al., 2021). Drawing from actor-network-theory, Pavlovich et al. argue that the relationality of meshworks is of value over existing network analyses. They explain that meshworks enable interrelationships between different levels of a food system, through "knots of integration", "threads as processes of movement", and

“weave as the resilience of a food system” to create a meshing of entangled relationships (Pavlovich et al., 2021, p. 145), enhancing other layers of a global food system (Dahlberg, 1993).

The concept of meshworks enables AFNs and caring food systems to be mapped. Meshworks can operate horizontally and vertically but serve to organise food within a patchwork of relational connectivity. This feature creates an opportunity to represent knots as hubs or nodes of production or distribution, threads or flows of localised food moving from producer to eater, and the overall weave as the reach and strength of an alternative, caring food system.

2.5 CONCLUSION

When researching SSGs in Taranaki, I have looked at food geography theories including food regimes (Friedmann, 2005; McMichael, 2009), global food systems and food chains (Fold & Pritchard, 2005; Gereffi & Korzeniewicz, 1994; Tsing, 2009). They set the scene for how food is structured globally. Historical processes of globalisation and industrialisation have facilitated these regimes. I have also considered the dynamics of a capitalist economy and the inequality this can bring about in food systems (Harvey, 2005). These struggles are voiced by commentators like the *UN*, who bring issues of food security and food sovereignty to our attention. Based on commentary of how the global food system creates security and sovereignty issues (Trauger, 2014; Fladvad, 2019), I have chosen to explore the potential of a regenerative food system and meshwork theory (Pavlovich et al., 2021) at a local scale. Social values of care espoused in moral economy theory (Carlisle, 2015; Jackson et al., 2009; Morgan, 2015) and Tronto's ethic of care work (2015) provides ways to consider the resocialisation of food. While mindful of their limitations, these theories provide a lens on the value and capacity of SSGs beyond economic criteria within or as an adjunct to a global food system. These theories are reflected in the approach of Taranaki's SSGs.

The literature highlights the value of regionally produced food by autonomous SSGs. It highlights the need for a regenerative approach that supplements the global food system. My review of food geography literature reveals that the social aspects of RA are not well researched or explored currently. My research,

therefore, questions whether positive social values are achievable in Taranaki by mapping the relational meshwork created by SSGs. I consider how my research participants' activities can be situated at the intersections of knots or threads of food moving from place to place, and to what level they are able to form a weave of food resilience for local communities. The key thematic moving forward in my research is: Do Taranaki's regenerative SSGs operate within and contribute to a caring food system?

CHAPTER 3: ETHNOGRAPHIC OBSERVATIONS - METHODOLOGY

*“Within geography, ethnography is a research strategy used to understand how people create and experience their worlds through processes such as place making, inhabiting social spaces, forging local and transnational networks, and representing and decolonizing spatial imaginaries”
Watson & Till, 2010, p. 121.*

3.1 INTRODUCTION

In order to assess how SSGs create values of care through a relational meshwork, my research drew on AFN literature. The PIVOT project afforded me opportunities to situate my research in Taranaki, where a group of SSGs operate in a regenerative way to supply food to local eaters. I therefore, planned my research to focus on the activities of these growers who provide regionalised food access, diversity in produce and marketplaces, as well as positive social outcomes.

The research proposal for this thesis was notified to the Massey University Human Ethics Committee and received low-risk ethics approval. The proposal provided a description of research design, data management, and ethics provisions. In particular, confidentiality of individuals was discussed, consent forms were gained for semi-structured interviews, and verbal consent for iPhone audio recordings and photography was sought for all field research and participant observations. Anonymity could not be guaranteed to the participants based on the small location of the research, and the ability for people to readily identify who was being discussed in this thesis. However, confidentiality of financial and or any other sensitive material was provided. This was discussed with participants, and they were happy to be identified in my research and for the use of recorded material and photographs to appear in my thesis. I chose to take a qualitative and ethnographic approach to my research based on immersive opportunities that allowed me to interact closely with growers as I came to understand the culture of their growing community over a one-year research period. This enabled and required a "mixed-methods scholarship" (Hay & Cope, 2016, p. 375),

which was achieved through participant observation and semi-structured interviews, thus generating rich field data for analysis.

3.2 THE PIVOT PROJECT

The PIVOT project was a Massey-led research project titled *Farming to Flourish - Regenerative Food Systems, Sustainable Livelihoods and Thriving Communities in Taranaki*. Massey University was awarded a Pivot - Enabling Innovation in Agriculture Premier Research Award in 2020, which was co-funded from the Bashford-Nicholls Trust.

The PIVOT project conducted over many visits to Taranaki (June 2020 - July 2021) included informal interviews, field research, literature reviews, public fora, data gathering and the development of detailed research activities such as surveys and workshops for growers. The research project will be completed in 2022. In total, 30 interactions generated the research data utilised for this thesis. This extended period of interaction and engagement allowed for reflection, continued reading, and discussions with PIVOT project team members, as well as the opportunity to build trusting relationships with growers and stakeholders. It allowed us to see growers adapt over time, hear stories told and retold, and observe transitions in their experiences. In this way, I felt I was researching with the growers, and together we were revealing what it is that they achieve through their efforts. They are to this day, interested in and caretakers of research undertaken for the PIVOT project.

As a researcher within the PIVOT project team, my responsibility was to steer my research direction and interactions with the growers. I had complete control over whom I met with and how I wanted to engage, and I have been able to tailor the research project to fit with the requirements for this thesis. I have been responsible for making my own observations and interviews, collating relevant reading material, writing up and analysing the results. Each person in the PIVOT project team had various interests and capabilities, which added different perspectives, bodies of literature, and experiences to discussions around what was occurring before us.

3.3 RESEARCH DESIGN

My research focus was based on addressing the following topics:

- 1) Types of alternative food systems growers participate in.
- 2) How growers, or their activities, improve food access to local communities.
- 3) Social benefits of their actions and practices.
- 4) How their work contributes to local resilience and sustainability.

The research approach was designed around qualitative research and an ethnographic analysis that allowed participants to speak for themselves, and for me to consider how they attach meaning to their world. This methodology enabled me to engage through in-depth discussion using open-ended questions, going through iterative cycles of reflection and follow up conversations. I then drew conclusions that I felt represented what SSGs in Taranaki were achieving, and reflected upon how this related to my research topics.

During my research, I tried to create equal relationships with participants and afford 'reciprocal power' within the researcher-research relationship. I achieved this quite well based on my perception of the quality of my ongoing relationships with the growers throughout the research. Given the purpose of the PIVOT project to focus on regenerative food systems, sustainable livelihoods and the creation of 'thriving communities', it was important to ensure participants did not feel bound by this framing, and to ensure that I did not express value judgements about ideological approaches to growing food. The research objectives were rarely discussed with growers, and my purpose was regularly expressed through statements such as "I would like to learn about what SSGs are doing here in Taranaki".

The suitability of ethnography as a research methodology for this project was based on its iterative nature (Watson & Till, 2010) and its ability to take account of social and cultural processes. This methodology allowed me to draw on sociological and anthropological tenets, allowing for holistic, immersive observation for fuller engagement in situ (Crang & Cook, 2007; Hitchings &

Latham, 2020). I spent time with growers on their properties, at a crop swap, selling at different market sites, at workshops and events, and in community gardens. I was able to focus on the social actions of food produced by the growers 'on the ground', or from 'within' their gardens. Crang & Cook point out, "research on social relations is made out of social relations" (2007, p. 9). I used these learnings to create a situated account of shortened commodity chains, small-scale regenerative farming, and caring practices within a localised relational meshwork.

Identifying researcher positionality was important, as well as identifying and acknowledging power imbalances as an 'academic' studying and analysing the growers. I felt it was important to avoid the risk of perpetuating colonial research perspectives, by trying to clearly listen and deeply understand how Māori growers view and consider the role of land, food and the interrelationships between people and food, which differs from my cultural upbringing. Positionality, subjectivity or reflexivity all reflect what Mansvelt & Berg describe as situated knowledges, which require researchers to consider their influence as "situated knowledge workers" and producers of "objects of knowledge" (2016, p. 400). As a researcher, acknowledging my perspective and values needed to be considered and accounted for at each stage of the research process.

I contemplated my social, locational, and ideological 'placement', as well as class, ethnicity, gender, and formative experiences affecting my positionality (Hay & Cope, 2016). Therefore, I had to recognise what ideologies could influence my view as an educated, female, middle-aged pākehā, with strong values of sustainability, eco-conscious decision-making, and a preference for diverse foods grown locally and organically. I needed to constantly challenge my views of SSGs operating in a regenerative food system as 'the answer' to the food system problems identified at the outset of my thesis. Acknowledging this caused me to shift my mindset from thinking about how SSGs could disrupt the global food system and instead look at how SSGs were adding to the global food system at a regional level. I could then consider the impact of long versus short commodity chains on food production. I reconsidered how SSGs could influence food security and food sovereignty, acknowledging that it is limited in scale and quantity.

I also needed to reflect and account for a Te Ao Māori world view. Linda Tūhiwai Smith speaks at length about the harm inflicted by researchers who may inadvertently "continue the project of colonialism" and the need to therefore focus on decolonising research methodologies (Watson & Till, 2010, p. 131). This sensibility was relevant in my research as engagement with hapū and tangata whenua emerged gradually during the PIVOT project. I have reflected on how colonisation and land use have adapted the Taranaki landscape, making some futures possible, while others have been prevented. Accounting for this meant my research could not solely look at the role of SSGs in contrast to large-scale agriculture and farming but I also needed to consider the underpinning realities of land rights in Aotearoa, and reflect on who determines what food is grown, for whom, and in which ways. It meant recognising the need to look and listen for the perspective of indigenous people, even if it was not necessarily very evident in my original research interactions. Watson and Till point out "decolonizing ethnography means to consider research a process of collaboration rather than appropriation" (2010, p. 122).

I worked alongside a Taranaki-based grower and PIVOT project team member to collaborate around engaging with the small-scale grower sector in Taranaki, using a snowballing and opportunistic sampling strategy of identifying individuals with relevance to my research thematic (Stratford & Bradshaw, 2016). This approach connected me to growers and producers in the region, who operate small-scale endeavours using alternate modes of growing compared to industrialised, productivist growers or farmers typical of the Taranaki region.

Observations contributed substantially to my research, creating an active research experience (Hay & Cope, 2016). These included 'go-along walking interviews' (referred to as site visits within this thesis) as the most favoured option for generating embodied learning. All research interactions, including a range of controlled observation interactions, are identified in Appendix 1. These interactions have occurred and been repeated multiple times across multiple settings over the research period, providing extended opportunities to observe practices and values in action. Site visits allowed me to directly observe growers' practices and interactions within their growing spaces and with other growers and customers in various offsite settings such as workshops and events. The result

of this research approach has allowed me to become embedded in this small sector to co-create knowledge and understanding with growers over a one-year research period.

Utilising a qualitative, mixed-methods scholarship allowed me to compare participant observation and semi-structured interview data, which enabled me to compare research participants over time and in different contexts. This strategy extended my understanding and enabled me to form opinions of their worldview; their motivations for growing produce the way they do. Uncontrolled observations enabled the collation of informal and ad hoc data to aid my understanding of what is said in interview situations or more formal settings. It allowed me to see what happens during everyday practices and interactions, rather than relying on research participants choosing to express what they think they do (Crang & Cook, 2007). Recording accurate journal notes was essential, and these annotations added to the data being gathered through audio recordings of site visits, transcripts from interviews, and informal surveys.

Utilising participant observation as an inductive ethnographic approach enabled me to go on a shared journey with the research participants in order to better understand what SSGs in Taranaki offer the region. As Watson and Till point out, ethnographers are not merely collecting information. They "participate with others in the creation of knowledge and meaning through social interactions" (2010, p. 125). I paid particular attention to each SSG's materiality, meaning, and practices throughout my research (Cresswell, 2009).

Semi-structured interviews quickly became less useful in my research as time went on, as they did not seem to reflect the reality of what growers necessarily did in terms of their daily practices or how they engaged and discussed matters with their cohorts. I transitioned to more observational and participative styles of coming to an understanding, which aligned with what MacKian refers to as analysing the "experience or phenomenon under investigation" (2010, p. 364) rather than a 'text' produced by qualitative interviews. The potential weakness of interviews and the resulting texts they produce, MacKian claims, is they can become relatively artificial, which was borne out in my research. I realised that my growers talked more freely and instinctually about what they were doing as they walked on the land. I chose to discontinue semi-structured interviews in

favour of site visits and observations because they produced free-ranging discussion and easy reflection on the part of the grower. My interviewees were growers I met and engaged with on every trip to Taranaki throughout the research, which afforded me greater knowledge and insight based on relationships we formed.

Transcripts for the semi-structured interviews I had conducted, were summarised into field notes ready for analysis. Field notes were then summarised into a "reflexive" research memo, using the memo technique, and identified themes to be considered in relation to my literature (Hay & Cope, 2016, p. 375). My notes, videos, photographs, social media posts, and interviews were written descriptively into field memos, coded using reflective inquiry, and then analysed to draw out meta-themes and connections to theories identified through a literature review. The objective has been to arrive at "rich descriptions and detailed accounts that depict the worlds, environments, peoples, contexts, and meaning-makings we have researched, engaged in, and learned from" (Watson & Till, 2010, p. 129).

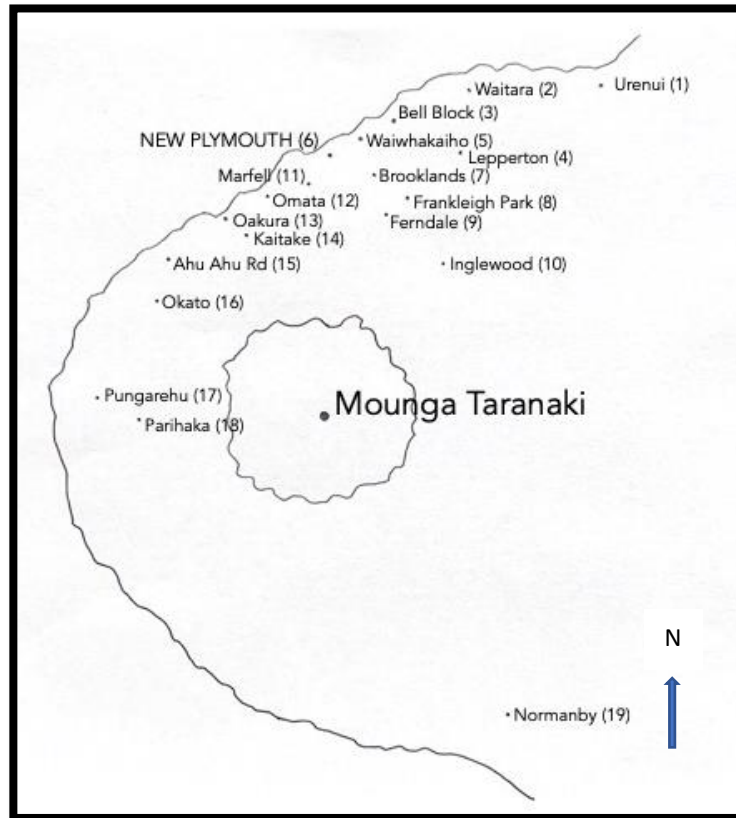
The last step required me to interpret my findings and produce a final analysis. Crang & Cook describe this process, saying, "...the 'analysis' of this informally constructed 'data' is likely to be via an informal process of piecing things together, figuring things out, gaining focus and direction as the research unfolds" (2007, p. 132). My experience mirrored this evolving picture of my findings and going through a recursive and reflexive reconstruction process as my observations and reflections continued to develop in the final stages of the PIVOT project and my thesis development (Ouma, 2015). During my research, specific ideas gained traction in my mind, such as notions of scale concerning labour inputs as a measure of wellbeing, community resilience created through various marketplaces and food-based sharing activities, or how different places of food growing are valued and supported. Looking back at my literature continually helped me to narrow in on how I could draw up key social elements from my memos.

The final stage of my research was to interpret the findings and to make clear how I had achieved this "creative aspect" of interpreting data (MacKain, 2010, p. 5). In this research project, the findings indicated various positive social

outcomes and descriptions of values and care. I was challenged by acknowledging the fact that my 'findings' are findings of a moment in time, as I was aware of the shifting nature of the growers and their activities. However, I realised that irrespective of who came and went from the research field, it was their respective practices of care and the social outcomes that could be captured within a Meshwork.

3.4 TARANAKI'S REGENERATIVE SMALL-SCALE GROWERS

My research focused on 15 small-scale grower operations in Taranaki (Figure 3.1). These SSGs typically farm sustainably, organically, utilising regenerative or permaculture practices, or the disciplines of hua parakore and maramataka. Growers earn income or receive other benefits from their land use, and supply values-based produce to themselves, whānau, and the wider community. SSGs are mainly self-taught, opting for online research through media channels such as *YouTube*, trial and error in their gardens, and workshops to from others. The research has involved specific projects focused on both production and distribution of growers' produce within a regenerative food system. Research interaction included visiting backyard gardeners, growers on plots of land usually under three hectares in size, community gardens, marae māra kai, crop swaps, a Farmers' market, a unique shared retail outlet, and participating in events and workshops with growers.



- | | |
|---|--|
| 1. Urenui – Maria Lempriere, <i>Peihana Farm</i> | 12. Omata – Ryan Gargan & Megan Turner, <i>Beach Road Milk Kiosk</i> |
| 2. Waitara – Pounamu Skelton, Waitara Community | 13. Oakura – Long Lunch |
| 3. Bell Block – Simeon Theobald, <i>Puriri Farm</i> | 14. Kaitake – Toby Dixon and Ryan Goot, <i>Kaitake Farm</i> |
| 4. Lepperton – Shonagh Hopkirk, rural property | 15. Ahu Ahu Rd – Melissa Holms, <i>Coastal Market Garden</i> |
| 5. Waiwhakaiho – Glen Skipper, <i>Katere Mārae</i> | 16. Okato – Taryn and Matt Hart, <i>Harty Grnz; Te Rūrū Coastal Market</i> |
| 6. New Plymouth – <i>Taranaki Farmers’ Market</i> | 17. Pungarehu – Urs Signer, family food forest |
| 7. Brooklands – Mary Sagen, urban backyard | 18. Parihaka – Parihaka Maara Kai |
| 8. Frankleigh Park – <i>Freeman Farm</i> | 19. Normanby – Michelle Busby, <i>Goldbush Micro Farm</i> |
| 9. Ferndale – Cecily Bull, <i>Thula Greens</i> | |
| 10. Inglewood – Crop Swap | |
| 11. Marfell – <i>Marfell Community Garden</i> | |

Figure 3.1: Map of Grower Locations. Source Sita Venkateswar.

The growers I met are committed to environmental improvements and the growth of highly nutritious food. The key to this, they believe, is focusing on soil health and growing practices that enhance the quality of their produce. Growers want to provide food differently from how people typically access food from supermarkets entangled in a global food system, which they view as less ideal than consuming and eating regeneratively grown produce. Producing food regionally for local consumers is fundamental to their approach.

3.5 CONCLUSION

My methodology reflects an ethnographic research approach, drawing from site visits, observations, interviews, and participation at a range of grower locations and events, creating a picture of what the impact of their practices are within the region. Through this research, I hope to shed light on the ethic of care enacted by small-scale regenerative growers within the Taranaki meshwork. I also aim to show how localised food production and distribution can improve food access and equity within a region.

CHAPTER 4: TŪRANGAWAEWAE – WHOSE PLACE TO STAND?

4.1 INTRODUCTION

In asking 'whose place to stand?', this chapter discusses food production in Taranaki, and considers the process of 'place-making' that colonisation and farming have brought about. Taranaki evolved into an export-oriented dairy farming region with a large oil and gas hub. Both continue to shape the region's social fabric. In this chapter I explore regional attributes, demographics, and historical factors that influenced the development of Taranaki. This provides a basis for considering Taranaki's SSGs place in the region today.



Figure 4.1: Mouna Taranaki. Photograph by Harley Betts

4.2 GEOGRAPHY AND ENVIRONMENT

Taranaki is dominated by ever-changing views of Mouna Taranaki. This landscape of contested histories, acts as a palimpsest of first human settlement, colonisation, land appropriation, dispossession, and agricultural productivism. All have left their mark. Places, more than physical locations, are agents of meaning, sentiment and belonging. They change and adapt, are constructed deconstructed and reconstructed, becoming different landscapes to different people. Taranaki's identity is influenced by cultural, colonial, and agricultural histories. Settlers claimed¹³, cleared, extracted, and farmed the land from the 1860s, creating and recreating different iterations of place.

Covering 723,610 hectares, Taranaki is located on the west coast of the north island of Aotearoa. It reaches north to the Mohakatino catchment, south to the Waitōtara catchment, and inland to the boundary of the Whanganui catchment, covering three territorial authorities (Figure 4.2). Extending 12 nautical miles offshore, Taranaki has a sunny, windy climate with a good supply of evenly distributed rainfall and moderate temperatures (Chappell, 2014). The landscape is overlooked by Mouna Taranaki standing at 2,518 metres as the second highest peak in the North Island. Egmont National Park encircles the mountain and features surf to summit ecosystems, waterfalls, temperate rainforest and swamp microclimates. Walking tracks abound throughout the park. Ring plains around the mountain and park flow out to coastal borders on three sides through rural farmland and small townships, and one major city centre - New Plymouth (Taranaki Regional Council, n.d.).

Taranaki was originally densely forested with evergreen subtropical rainforest, but now the Taranaki Regional Council (TRC) describes four landforms (Figure 4.2):

- 1) Ring plain encircling Mouna Taranaki with fertile free-draining volcanic soils utilised for intensive pastoral farming, especially dairying.

¹³ It is recognised that in many cases, the land was stolen, confiscated, leased perpetually for for extremely reduced rates, or misappropriated by settlers or the Crown.

- 2) Hill country to the east of the ring plane features siltstone, sandstone, and mudstone soils. This landform, used for pastoral farming and commercial forestry, is steeply dissected and prone to soil erosion and slips.
- 3) Coastal terraces are considered the most versatile and productive soils in the region.
- 4) The coastal environment with its westerly exposure creates high-energy wave and wind conditions.

Key environmental issues are water use and quality, especially deterioration of water in the lower reaches of rivers caused by intensive agricultural land use (Figure 4.3). Intensive farming in Taranaki has notable environmental impacts, and increased stocking rates impact free-draining soils requiring close control (Shadbolt & Apparao, 2016). Minimising farming impacts in the flat ring plains requires increased efforts to keep pace with damage and to ameliorate compromised environments (Taranaki Regional Council, n.d.). More effort is needed to manage farm run-off, sediment, and nutrient waterway build-up. These impacts signal that the sector appears to operate outside the thresholds of what the environment can sustain.

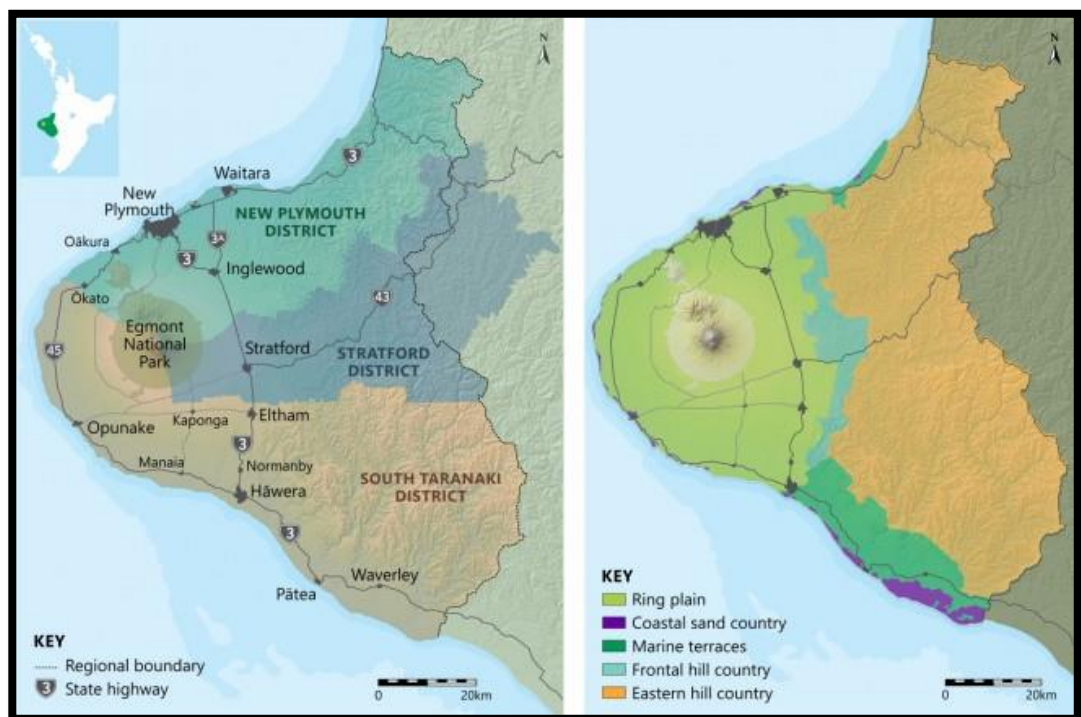


Figure 4.2: (Left) Districts, State Highways and Key Settlements. (Right) Taranaki Landforms. (Taranaki Regional Council, n.d.)

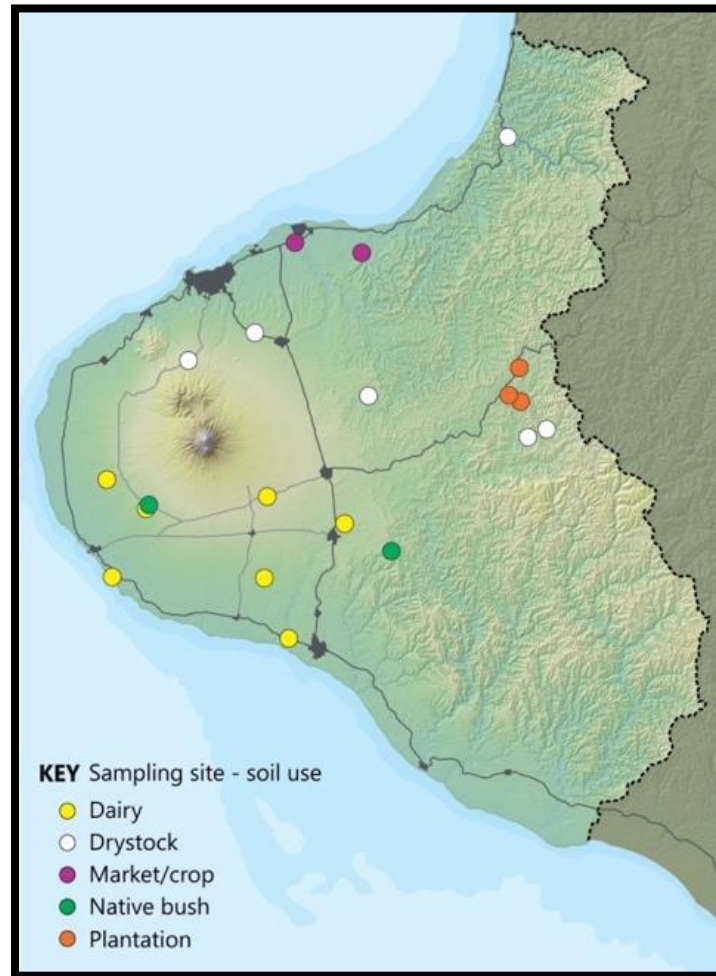


Figure 4.3 Taranaki soil quality monitoring sites. (Taranaki Regional Council, n.d.)

4.3 TARANAKI YESTERDAY

Taranaki's history provides insight into the sense of place that exists today, and to the differing social connections or disconnections that people in Taranaki experience. Tension still exists around the fundamental differences in how Māori and settlers considered land rights¹⁴. The region was transformed into farming land through Wakefield's organised settlement programme of 'sufficient price'¹⁵,

¹⁴ There are multiple factors and events that have created complicated land right negotiations up to and including the current day, as well as substantial evidence of unrightfully purchased land and extended land leases, and land confiscations by the Crown, that this thesis is not able to address.

¹⁵ Edward Wakefield, as founder of organised settlement in Aotearoa, imagined a style of bucolic south England farming and strategised how settlers - people from overpopulated London, the Scottish highland clearances, or famished Irish farmers - would move from labourer to land owner, and in so doing support an organised and structured immigration of further labourers referred to as the 'sufficient price' scheme (Campbell, 2020). This, he believed, would allow a natural progression of social stratification and the progression of labourer to land owner, while funding the continued immigration of further labourers to Aotearoa (Binney et al., 1990; Hargreaves, 1963).

which met the needs of settlers who were eager to become landowners. This caused tensions with local Māori who had been successfully farming the land and supplying external settlements. From 1840 the Crown assisted Wakefield's *New Zealand Company* by buying land from Māori to on-sell, lease or grant to settlers (McAloon, n.d.). Pastoral land was leased at low rates and extended into perpetual leases, which enabled easy access to land for cultivation and housing by settlers. In Taranaki, this created an affordable entry point and the establishment of a European-style farming sector. This saw the clear-felling and burning of the ring-plain forests and inland hill-country bush (Johnston, 1950; *The Taranaki Region*, n.d.), as well as draining of the Ngaere wetlands in the continued efforts of a "grassland revolution" (Winder, 2009, p. 197). This period was characterised by surges and slumps in land development and settlement, but ultimately disruptions were overcome and the farming sector in Taranaki stabilised (Hargreaves, 1963; Johnston, 1950).

Conflict in Taranaki between Māori and the Crown intensified bringing about three distinct periods of what is known as the Taranaki Land Wars¹⁶ in 1860, 1863, and again in 1868. Morin and Berg (2001) discuss the nature of "dubious land deals involving the *New Zealand Company*¹⁷" and the intricacies of differing viewpoints of Māori and European settlers. Crown confiscated lands were allocated to pākehā settlers, and the loss of land by Māori in Taranaki was substantial. In 1864 and 1865, most of the region's 485,470 hectares of land were confiscated, including Mouna Taranaki (Figure 4.4). The *New Zealand Company* bought up the fertile coastal terraces of Te Āti Awa that stretched from the coast to Mouna Taranaki around New Plymouth and Waitara in 1863 (Figure 4.5.) (McAloon, n.d.). The sale of this land was enacted by a junior chief of the tribe in retribution of the tribe's ariki Wiremu Kīngi Te Rangitāke. The Crown knew this, but accepted the sale offer, triggering the main phase of the New Zealand Wars (Addis, 2017). By 1870 extensive land clearing of the Taranaki ring plains had created workable farming pasture (Taranaki Regional Council, n.d.). At this point, colonisation of the country through British emigration saw a

¹⁶ The sale of land in Waitara brought about the first year-long war. The second came about with soldier occupation of a block of land, and lasted three years, erupting in a third bout in 1868.

¹⁷ The *New Zealand Company*, under the Directorship of Edward Wakefield, steered the course of settlement in New Zealand. While the legality of land purchases it offered migrants was questionable, and the marketing presented in Britain fanciful, the company still brought the vast majority of New Zealand's population from Britain.

dedicated start to “Europeanizing of the landscape”, and what Brooking & Pawson call the “imperial power of grass as a transformative agent” (Brooking & Pawson, 2007, p. 418).

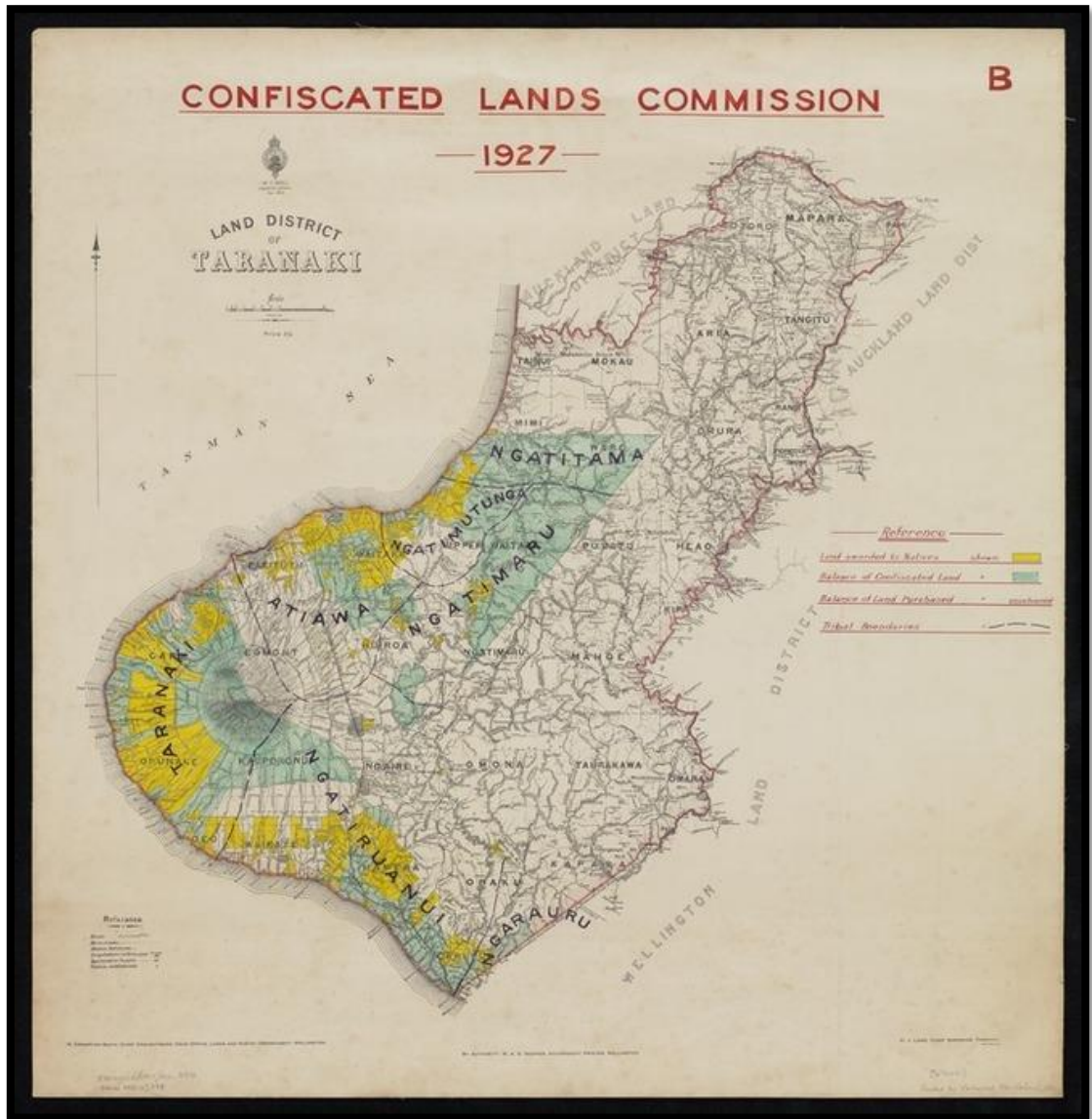


Figure 4.4: Land allocation and confiscation in the Taranaki Region (Confiscated Lands, 1927)



Figure 4.5: Wiremu Kīngi Te Rangitāke's Pā (Warre, n.d.).

Following the New Zealand Wars, Taranaki experienced a process of Māori dispossession brought about by ongoing acquisition, or *raupatu*, of land for the benefit of colonising settlers. Tofa (2014) describes the time of Māori land alienation experienced in Taranaki, and the role of Parihaka in 1881 as a “safe haven for displaced Māori within and beyond the Taranaki region”, creating a peaceful and influential community which under the leadership of Tohu Kakahi and Te Whiti o Rongomai. Settlers had seen the region as unoccupied fertile ‘wasteland’ and, as Carrington had stated in 1860, “the richest and best province in the colony for all agricultural purposes” (cited in Tofa, 2014, p. 28). As Tofa describes, “the confiscations dispossessed Māori of their livelihoods, and continue to impact current generations” (2014, p. 29).

4.4 SOCIAL AND ECONOMIC FACTORS

Taranaki accounts for 2.5% of the country's total population according to 2018 Census data (Statistics NZ, 2018). The *tangata whenua* of the region are eight groups who solidified connections to the land from the 16th century (Figure 4.6): Ngāti Tama, Ngāti Mutunga, Ngāti Maru and Te Āti Awa with several hapū descended from the *waka Tokomaru*; Taranaki hapū from the *Kurahaupō*; and Ngā Ruahine, Ngāti Ruanui, and Ngā Rauru from the *waka Awatere* (Lambert, 2015). Forced migration resulting from the musket wars also influenced tribal composition of the area.

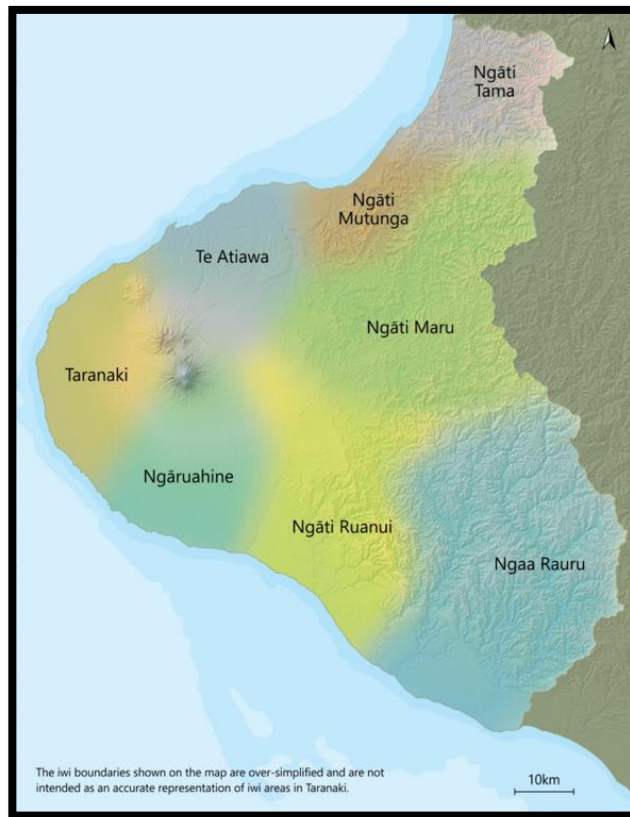


Figure 4.6 General Iwi Boundaries. (Taranaki Regional Council, n.d.)

Today, the Taranaki region comprises a network of a city, small towns, as well as rural and coastal living environments sustained by the oil and dairy industry. It has a variety of outdoor-based recreational opportunities like hiking, skiing, sea-based activities, and significant national parks and gardens. It has a growing arts and culture sector attracting significant domestic and international tourism. Taranaki is home to 117,561 people, of which 13.7% were born outside Aotearoa, compared with 27.4% nationally (New Zealand Immigration, 2021) (Statistics NZ, n.d.). The estimated Māori population in the New Plymouth district is 14,370, or 1.7% of New Zealand's population (New Plymouth District Council, n.d.).

Economic data shows a median individual income of \$30,400, with 16% earning over \$70,000 a year (New Plymouth District Council, n.d.). The national median for individual income is \$57,000 (Statistics NZ, n.d.). Seventy-one per cent of the Taranaki region are employed (Ministry of Business, Innovation and Employment, 2020), and nearly 20% of the population are in full-time study (*District Statistics*). The average house price in mid-2020 in New Plymouth was \$497,632. Prices have increased over the last ten years at a rate of 6.5% (New Zealand Immigration,

2021), with just over 56% owning or partly owning their homes (*District Statistics*). The region experiences housing deprivation which is evident in the communities of Waitara, Marfell and Spotswood. Taranaki people make up 20% of Aotearoa's most health deprived, with a median rank of 4.8%, worse than the median for the country (Yong et al., 2017). This means they have vulnerable communities who may suffer food insecurity.

Agriculture, a significant player in Taranaki's employment, plays a prominent role in the socio-economic wellbeing of the region's population. Doubling the national average, just over 16% of Taranaki's labour force are employed in agriculture and fisheries. Dairy farming is the most heavily represented activity, contributing \$10 billion to the country's economy, creating a farming focus in the region's identity and income. This is likely to have established a strong sense of identity for the region. Additionally, Aotearoa's only oil and gas reserves are based onshore and offshore in Taranaki contributing 2.9% to the nation's GDP and 2.3% to the nation's employment (New Zealand Immigration, 2021). Most of the region "has leveraged off its rich petroleum and gas resources and established dairy sector to provide the second highest GDP per capita in New Zealand" (New Zealand Immigration, 2021, p. n.p.).

The energy sector has two direct relevancies to Taranaki. Firstly, it is unique in Aotearoa as an extractable resource, which has seen the establishment of a highly profitable sector in the region. The Kapuni and offshore Maui fields make up a substantial part of the country's natural gas resources. Drilling programmes have resulted in additional fields being discovered over the last 10 to 15 years (Taranaki Regional Council, n.d.). Over 7,000 jobs exist in this sector (Venture Taranaki, n.d.), creating an educated and specialist workforce. This influences the social makeup of Taranaki, which impacts social and cultural factors, e.g., demand for housing, education, and entertainment to meet the needs and expectations of that workforce. The second important factor is the emerging discourse around environmental considerations which were raised through the government's *Just Transitions* strategy. The government announced in 2018 that it would not issue any further offshore oil or gas exploration permits, which will have a substantial impact on this sector and the region going forward.

Taranaki's food production economy contributes \$340 million annually to regional GDP and provides 4,300 jobs, predominantly through manufacturing

and dairy-related food production. Dairy, red meat and poultry make up 90% of the region's food production in terms of employment and GDP – the second-highest per capita in the country, firmly placing food at the centre of Taranaki's identity (Howarth & Rhodes, 2017). No data exists about the extent of SSGs and producers in the region. However, *EAT NZ* comments that in Taranaki, there are many gardens:

Within these gardens is a hidden but rich food story that is not connected to commerce but rather the history of the region's proud and resilient people. Despite the 'big business' predominance, there is a small but growing movement of passionate entrepreneurs and growers who value small-scale, sustainable and ethical food production. (*EAT NZ*, 2021).

The absence of discussion about the role of such growers in the region reflects the tension between economic values of the global food system versus values generated through a localised resilient food system.

4.5 HISTORY OF FARMING

Taranaki's farming history began with English-style farming of oat, barley and wheat, as well as potatoes, turnips and other vegetables (Hargreaves, 1963). In 1842 the first cow appeared, and by 1849, Taranaki was the "predominant food exporting settlement in New Zealand" (Hargreaves, 1963, p. 47). Nevertheless, 1850 was the tipping-point into livestock farming, beginning with sheep, which were more profitable than growing grain crops in quickly exhausted soils (Hargreaves, 1963). Also in 1850 the first comprehensive statistics on domestic export trade of food and agricultural products from Taranaki were produced (Hargreaves).

By 1870, extensive land clearing created more farming pasture (Burgess, 1951; Johnston, 1950; *The Taranaki Region*, n.d.), but it took until the mid-1880s and the arrival of refrigeration for dairying to become well established and exportable (Burgess, 1951). The first milk factories in Taranaki and Waikato began processing whole milk (Stringleman & Scrimmegeour, 2008a) and were able to export to the

United Kingdom from that time. These factories established the region's significance through the mergers and amalgamations of cooperatives and milk factories into more significant operations, providing ever-expanding and diversified milk-based products (Willis, 1984). However, the transportation and processing of dairy challenged the sector's growth until the late 1880s (Stringleman & Scrimmegeour, 2008). Taranaki dairy farmers kept themselves afloat between 1870 and 1880 by selling edible wood-ear fungus (*Auricularia cornea*), referred to locally as 'Taranaki Wool' to local entrepreneur, Chew Chong¹⁸.

Increased wealth and living standards in Europe and Britain created an increased demand for meat and dairy, solidifying Taranaki's role as provider to the 'Motherland' (Figure 4.6)(Brooking & Pawson, 2007). Aotearoa's foray into farming was hard-won, requiring significant 'taming' of the natural environment, suggesting the ecology was not well-suited to the known style of farming introduced by settlers. The settlers overlooked the success of what Māori were already producing on the existing landscape (Campbell, 2020). Land clearing and initial wheat crops in Taranaki caused periods of soil deterioration (Burgess, 1951; Hargreaves, 1963), necessitating the application of fertilisers to support pasture growth and mitigation of weeds (Johnston, 1950). Initially logging and ploughing provided fuel and consequently ash to feed pasture. However, when deterioration reoccurred artificial fertilisers, blood and bone, basic slag and imported superphosphate were used to maintain pasture production (Burgess, 1951, p. 41).

In the long term, farming was considered a successful undertaking with the development of processing factories and a shipping port to support the industry, with Johnston proclaiming:

The conversion of thousands of acres of dense native forest to fertile dairy farms calls for a tribute to the fortitude of the early Taranaki settlers, and

¹⁸ Chong recognised its gourmet and medicinal properties and began exporting it to China, where it outperformed butter earnings until refrigeration and improved transport networks provided the means to increase dairy and meat exports to Britain (Burgess, 1951; W. B. Johnston, 1950; Willis, 1984).

their monument is the current production [1950] of nearly 53,000 tons of cheese, which is 48% of the Dominion cheese production. (Johnston, 1950, p. 44).

Aotearoa's suitability as farmland for the Empire saw decades of increased grazing, mechanisation, high inputs of fertiliser, and technical innovation creating internationally competitive commodities. Small farms, factories, and cooperatives were progressively merged into larger entities while small local dairy factories were converted into large milk-processing plants.

Sheep and beef farming now dominates the hill country of Taranaki, and the combined agriculture sector is considered an integral component of the regional economy, representing 10% of the country's milking herd (Taranaki Regional Council, n.d.). Consolidation nationwide has continued to the present decade. Few dairy cooperatives remain. Fonterra Co-Operative Group¹⁹ manages 96% of raw milk collection and production, Westland Milk Products, and Tatua Co-Operative Dairy Company manage the remaining 4% (Granwal, 2022; Stringleman & Scrimemgeour, 2008). In recent years, some new companies have entered the market reducing Fonterra's share from 96% down to 81%; however, the size and influence of this sector remains strong and firmly enmeshed in the global food system.

¹⁹ Fonterra, Aotearoa's largest cooperative today, is a publicly listed cooperative involved in the manufacturing and retail of dairy products, "Fonterra is New Zealand's largest company and its 14,000 farmer shareholders supply around 12 billion litres of milk a year, making the company the largest individual player on the international dairy market" ('Fonterra Credit Ratings Underpinned by Monopoly', n.d.). This cooperative combines the milk produced by farmers to market their milk and collectively pursue economic wellbeing on behalf of the cooperative's member-owners. In spite of its cooperative operating structure, Fonterra's scale and power make it a substantial agri-food business that has been likened to a monopoly at times, "Fonterra's strong credit ratings reflect its near monopoly as a purchaser for milk produced by the nation's dairy farmers, and its near total domination of the nation's dairy exports" ('Fonterra Credit Ratings Underpinned by Monopoly', n.d.). This creates a sense that Fonterra, is operating in a similar way to other transnational agri-food companies.



Figure 4.7: New Zealand Dairy Board Promotion (Exporting Butter to Britain, n.d.).

4.6 CONCLUSION

The impact of colonisation and productivism has made me consider whose place it is to stand in Taranaki. Descendants of early iwi stand proudly on their whenua in the shadow of their tipuna, Mounga Taranaki. Descendants of early European settlers also stand on this land, and there is ongoing mamae and pain which challenges how the land can be considered. Throughout this chapter, a picture of the landscape of Taranaki has been presented, identifying the critical socio-economic and historic narratives of the region. Productivist farming has been this country's dominating narrative and rural landscape since European settlement. A further critical point is how land use for food provisioning has been prioritised – what are the social and spatial impacts of our current system, and what opportunities are there for alternative, regenerative models? In the next chapter, I report my findings from SSGs operating within this context to understand food provisioning within the region.

CHAPTER 5: LIFE WITHIN THE MESHWORK – ETHNOGRAPHIC VIGNETTES

5.1 TARANAKI'S REGENERATIVE SMALL-SCALE GROWERS

Below, I feature the growers (a full list of interactions is included as Appendix 1), who produce an extensive range of fruit, vegetables and products from their gardens. I describe the growers as regenerative based on my analysis of their practices and values which correlate with literature discussed in Chapter Two. They are identifiable by their focus on practices²⁰ that holistically regenerate a complete ecology, embracing human and more-than-human relationships, with a strong sense of kaitiakitanga. In short, they showed me how healthy soil brings about healthy plants and animals, brings about healthy people. Their actions and values contribute to a moral economy and can be considered more directly through the practices of care they exhibit (Tronto, 2015), and the reach of this which can be represented as a regional meshwork (Pavlovich et al., 2021).

Four vignettes are presented as evidence of my ethnographic learning and field notes which explore in more detail some of my interaction with the people I met. The vignettes capture how growing and distribution practices reflect the critical theories presented in this thesis. Summarised findings relating to the care exhibited by these growers are then explored in Chapter Six.

As discussed earlier, anonymity could not be guaranteed to participants based on the location of the research and the ability for people to identify who was being discussed. However, confidentiality of financial or sensitive material was provided. This was discussed with participants, and they were happy to be identified in my research.

²⁰ This involves low-to-no synthetic inputs, avoidance of tillage to protect soil structures, improved below-ground biodiversity, and enhanced water and airflow, and they generate a range of positive social outcomes.

Maria Lempriere

Peihana Farm site visit, Urenui

<https://www.facebook.com/PeihanaFarm/community/>

Maria provides a grocery box delivery service, sells to a co-op, is a seed saver, a crop swapper, and hosts many workshops within her community.

Photo Source: Tran Lawrence



Mary Sagen

Urban backyard garden site visit, Brooklands

Mary (pictured far right) is working in her backyard to support her family, a few friends, and neighbours.

Photo Source: Heidi McLeod



Cecily Bull

Thula Greens site visit, Ferndale

Cecily sells at the Taranaki Farmers' Market, directly to chefs, and customers via a small mailing list. Since my research concluded, Cecily has sold her business to Melissa of Coastal Market Farm in order to spend time with her grandchildren.

Photo Source: Heidi McLeod



Pounamu Skelton

Waitara community, Waitara

Pounamu is involved in starting and supporting a number of locally-based community projects to increase skills and knowledge around growing, self-sufficiency and hua parakore.

Photo Source: Heidi McLeod



Carl Freeman

Freeman Farm ¼ acre urban garden site visit, Frankleigh Park

<https://www.freemanfarms.org/>

Carl sells at the Taranaki Farmers' Market, and is now establishing grocery box sales.

Photo Source: Heidi McLeod



Shonagh Hopkirk

Rural garden site visit, Lepperton

Shongah invited the PIVOT team to her large rural property after the crop swap. She and her husband are largely self-sufficient. The growing and preserving of their produce was extensive.

Photo Source: Rebecca Algie



Urs Singer

Marfell Community Garden and Parihaka Maara Kai site visits, Marfell and Pungarehu

Urs works for *Sustainable Taranaki* and supports a number of community gardens in and out of work. He has his own food forest at home and sells at Te Rūrū Coastal Market.

Photo Source: Rebecca Algie

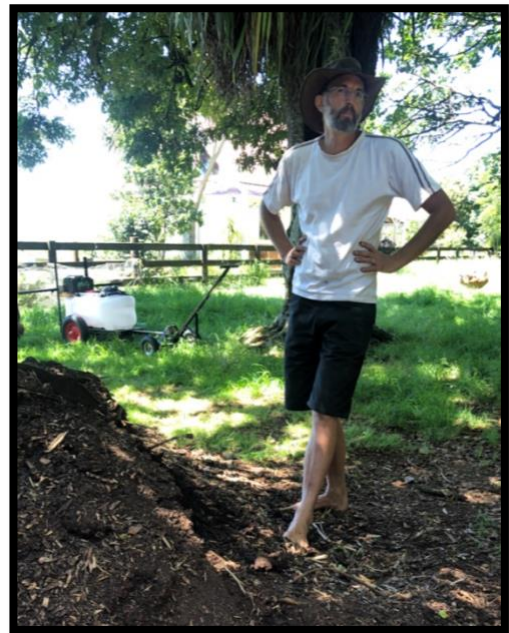


Simeon Theobald

Puriri Farm site visit, Bell Block

Simeon and Bronwyn relocated out of town to a semi-rural lifestyle block where they have a productive garden which supports themselves, family and friends. Simeon, as an engineer, is an avid inventor of equipment and practices, which repurpose waste and assist in regenerative gardening.

Photo Source: Heidi McLeod



Michelle Busby

Goldbush Micro Farm site visit, Normanby

<https://www.goldbushmicrofarm.nz/>

Michelle manages a grocery box delivery system in the south of Taranaki.

Photo Source: Tran Lawrence



Toby Dixon

Kaitake Farm site visit, Kaitake

<http://kaitakefarm.co.nz/>

Toby Dixon and Ryan Goot sell through the *Beach Road Milk Kiosk* and to a short list of other retailers. They also supply a local café.

Photo Source: Rebecca Algie



Melissa Holmes

Coastal Market Garden at the Taranaki Farmers' Market site visit

<https://www.facebook.com/coastalmarketgarden>

Melissa is a regular seller at both the Te Rūrū Coastal Market and Taranaki Farmers' Market.

Photo Source: Rebecca Algie



Taryn & Matt Hart

Harty Grnz, at Te Rūrū Coastal Market

<https://www.facebook.com/hartygrnz>

Newcomers Taryn and Matt attended PIVOT Workshop 2: Produce to Market and have participated in my research since then.

Photo Source: HARTYGRNZ Facebook



PIVOT Workshop 1: Soil Workshop

The PIVOT workshop brought a regenerative soil specialist to work with SSGs.

Photo Source: RNZ-Robin Martin



Ryan Gargan & Megan Turner

Beach Road Milk Kiosk site visit, Omata
<http://www.beachroadmilk.co.nz/>

The Kiosk is an A2 milk dispensary for regenerative dairy farmers Ryan and Megan, and produce from local growers and producers.

Photo Source: Rebecca Algie



Taranaki Farmers' Market site visit, New Plymouth CBD

<https://www.farmersmarkettaranaki.org.nz/>

Freeman Farm's, Robbie Keck (right), sets up for the weekly Farmers' Market.

Photo Source: Heidi McLeod



Crop Swap site visit - Waitoriki & Inglewood

<https://www.cropswapnz.co.nz/>

Swappers in action at the crop swap I visited in Taranaki.

Photo Source: Rebecca Algie



PIVOT Workshop 2: Produce to Market

The PIVOT workshop invited marketing and small-scale growing specialist, Dr Paul Pickering to work with local growers.

Photo Source: Heidi McLeod



PIVOT Workshop 3: Long Lunch

A celebration for Taranaki growers, producers and a variety of stakeholders. The PIVOT workshop coordinated a range of speakers and panels to consider the role of SSGs in Taranaki.

Photo Source: Tran Lawrence



<p>Glen Skipper Katere Mārae Visit, Waiwhakaiho</p> <p>https://www.tahuriwhenua.org/te-moeone-growing-for-the-future/</p> <p>Glen talked to me and the PIVOT group leaders about the land of his ancestors, and traditional food and growing practices.</p> <p>Photo Source: Kate MacPherson, https://issuu.com/wakatu/docs/koekoea_issue3_nga_huru_2021/s/12280774</p>	
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Table 5.1: Taranaki Growers.

5.2 VIGNETTES

These vignettes showcase four of Taranaki's SSGs and their farming activities. The practices and activities I captured in the vignettes can be articulated through the theories of AFNs, an ethic of care, and depicted as a localised relational meshwork of regenerative, caring, local food provision.

5.2.1 Maria Lempriere, Peihana Farm

Maria is the grower I spent most time with throughout my research visits. I visited her several times, conducted a semi-structured interview, and observed her participation in three PIVOT workshops. I observed her interacting at events focusing on food sustainability in the region and am appreciating our ongoing interactions.

Maria's evolution as a grower has developed over three years. She concentrates on diversifying produce for eating or medicine, supporting a domestic food sector in Taranaki, and motivating the productivity of other like-minded growers. She has a 3-hectare lifestyle property in the settlement of Urenui with her partner, dog, and a small number of livestock.



Figure 5.1: Maria Harvesting Kale. Photographer Tran Lawrence

VIGNETTE 1 MARIA LEMPRIERE, PEIHANA FARM

I trek around the farm with Maria in late January 2021. It's been seven months since I last visited, and the farm has developed more growing beds and a tunnel house filled with heritage tomatoes. Maria farewells a friend who comes once a week to help rehabilitate from illness. The friend helps for a few hours and takes vegetables home in return. Maria gets company, which is rare on her property, as well as much-needed labour.

Maria and I explore the farm discussing what is growing, experimental crops such as loofah, or her three sisters planting methodology. Her various growing zones do not represent the formulaic approach most market or organic gardeners tend to use. While the traditionalists' rows are optimised for crop production, accessibility and weed suppression, Maria's are more free-ranging. These zones reflect her approach to business too, varied and springing into life where opportunities exist. We sit down at her dining room table, and I interview her about her journey into full-time gardening.

I learn that Maria has a background of training and experiences both here and overseas. Serendipitously, this has led to her current ventures. Maria's journey has taken her from naturopathy workshops, Royal Horticultural Society studies, temping and waitressing in London, to celebrity speaker management. She did marketing for a software management company, handled international and community art collections, worked with plants and food, but it is people who have

always been central. Storytelling and the ability to make connections with people appear to be the inherent character traits of Maria. She is a connector and networker in the region, and her ability to see the bigger picture or curate the story of what something 'might be' makes her an effective collaborator. I found that at any event to do with small-scale growing, sustainability, RA, initiatives around seed saving or crop swaps, Maria was always connecting people to people and people to ideas.

The 2018 Just Transitions²¹ pilot in Taranaki acted as a catalyst for Maria. From this conference, she was motivated to gear up her home garden with a view to selling healthy and varied produce. She formed the Growers & Producers of North Taranaki Facebook group in 2018. From this interaction, she began a Saturday market in Urenui. When the first COVID-19 lockdown occurred, the market shut down, but Maria's relationships with buyers naturally progressed to a direct-to-consumer sales model. She created a spray-free grocery box delivery service, and the concept worked well. Drawing in several of her neighbours, Maria includes their produce into her grocery boxes. Maria did not return to the market model. There are several reasons growers opt for this approach, she said, and this was verified by another box delivery operator. Maria explained that the value of knowing what and how much to grow regularly to sustain your boxes is vital. The Farmers' market model requires a bountiful and appealing display to entice buyers, but this creates unpredictable demand levels, as experienced by several Taranaki growers who sell at the Taranaki's Farmers' Market. If excess produce is not sold, this benefits food recovery operators or free community pantries and pātaka kai, who the growers frequently pass their excess on to, to avoid waste. However, it represents labour and produce that has not materialised into profit. While growers have different perspectives on profit compared to those involved in large-scale market gardening or mainstream farming, SSGs still want to cover their costs and/or pay themselves an income.

In January, when I visited, Maria worked with 14 local growers and producers to create her grocery boxes and aimed for orders from 10 families per week. This, I noted, is the physical scale at which she can manage her gardening operation despite having a substantial available amount of land to utilise. If she had more customers, she would need

²¹ The Just Transitions initiative and work programme is aimed at transitioning New Zealand to a low emissions economy. It is run by the Ministry for Business, Innovation and Employment to assist the country's response to climate change, COVID-19, and economic pressures such as the Global Financial Crisis, as well as national policies and regulatory changes. It is recognised that initiatives to meet these challenges will cause dramatic changes that will impact some regions significantly, such as moving away from oil and gas extraction in Taranaki. The programme is intended to assist communities to adapt and manage these impacts and take advantage of opportunities to 'transition' to new businesses and business practices (Ministry of Business, Innovation & Employment, nd).

to grow more produce, which would require more labour. She admits the workdays are long and typically seven days a week. Nevertheless, she enjoys this way of working. She knows each of her customers, and they purchase because they want "real food with dirt on it". Fresh food, grown locally, where you know how it has been grown and by whom. Some of her customers are from overseas and familiar with this way of purchasing local food direct from a grower, and others are parents at the new Green School who have an environmental philosophy synonymous with Maria's practices. Interestingly, I noted on her Facebook page that in November 2021, she was reaching out for more help on her farm, as she was now supplying 25 families weekly. This substantial increase in her productivity shows how a hyper-local business can stimulate economic activity within a community

Maria's regenerative growing approach demonstrates how she operates with an ethic of care. From Peihana Farm, Maria drives several initiatives – a grocery box delivery service, workshops, she has a seed saving coordination role, participates in a local crop swap, and she actively collaborates with other local growers and producers. If Peihana Farm can be considered a meshwork knot, they myriad of activities, collaborations, and initiatives that Maria is involved with can be mapped as threads. As Maris creates more threads the density of the meshwork weave strengthens.



Figure 5.2: Maria Packing Grocery Box Deliveries. Photographer Tran Lawrence

5.2.2 Urs Signer, Marfell Community Garden

Urs is a Community Gardens Coordinator for *Sustainable Taranaki*. Born in Switzerland, Urs came to Aotearoa as an exchange student creating a life-long connection. He lives with his New Zealand partner and their children on a rural property, which includes an established food forest. Now fluent in Māori, he has become immersed in several communities in Taranaki and is passionate about caring for the environment, advocating for the rights of Māori, and opposing capitalist frameworks and ideologies that diminish access and equity for specific sectors of our communities. These ideologies are ever-present in our discussions, and they drive his efforts in a number of different areas, particularly his community garden coordination role, volunteer work in the Parihaka maara kai and through selling produce at the Te Rūrū Coastal Market.

The following vignette focuses on the Marfell Community Garden, where Urs established the garden after extended negotiations between *the New Plymouth District Council* and *Sustainable Taranaki*. Urs managed the negotiations for the 400m² lot, which runs alongside the Mangaotuku Walkway, and work in the māra began in November 2020, forming part of Sustainable Taranaki's 'Food Secure Communities Plan' work. Marfell is a community where food security is often compromised, as one of the more socio-economically deprived suburbs in Taranaki, ranking in the highest-level deprivation category within New Zealand (Hales, 2003). The Marfell Community Garden was established here in 2020, creating the 14th community garden or orchard in the region.



Figure 5.3: First Efforts at Marfell Community Garden. Photographer Erin Withers

VIGNETTE 2 MARFELL COMMUNITY GARDEN, URS SIGNER

Urs' political ideologies come to the fore immediately. He describes the land I'm standing on as having been 'claimed' by Council. He also describes several pā sites of relevance located around this plot, with the one closest to us being the historic Maungaroa Pā. He discusses the different tribal rights over time, reinforcing that Taranaki is a landscape of contested ownership and land claims.

Urs says they were offered other sites by the Council, some of which were landfills, but he rejected these because the soil required too much remediation to produce food. Urs adds that some sites like bowling greens are particularly bad because of the extent of chemicals used on the land. The Council provided a catalyst fund to Sustainable Taranaki to "feed the people", and Urs says the Council wanted this to happen in a more affluent area, but the Sustainable Taranaki team didn't want that. "We wanted it to be put in a lower socio-economic area". I imagine there was a perception on the part of the Council that more well-off people would have more time to contribute to the garden or more interest, but Urs says, "we just ignored that advice from Council". He explains that this is the poorest suburb in the area, "Marfell is exactly where we need to be".

It took ten months to acquire the site, which Urs cynically reckons wouldn't have taken as long if it was an oil drilling application. "It took a lot of effort with Council; even once we had the verbal go-ahead on this site, it still took another three months to get all the paperwork sorted", he explains. At that time, he arguably did the most important thing. He began with community engagement, just walking around the streets and talking to people to get their feedback. Urs knew a few people in the community, and they were "keen as". Getting that buy-in from the community was a requirement from the Council, and Urs said there was nothing negative, just concern about Pūkeko invading the patch.

Once the Council signed off, the mahi began. They needed masses of compost as the site was so degraded and compacted. It was hard work, but locals have stuck with it, and I note through their active Facebook Group that working bees and hui are continuing, the landscape is changing, and yes, the Pūkeko do invade the patch from time to time. Urs says relationships are the best thing coming out of the garden, "people who live close to each other, but may not have ever met each other".

All the decision-making is very communal, which I can see could create tensions in the future. Urs talks about the different practices and perspectives the community has in contrast to his desire to show them how they can work simply and at a scale they can manage, improving the soil and the garden's productivity. He explains that it's no use

bringing down a tractor and ripping up the land to create as many rows as possible, which then are planted or harvested all at once. That creates peaks and troughs in workloads, "managing time, people and resources is a major factor". I note there is redundancy built into the model, as the idea is that the community will take ownership of the garden, and Urs will not need to be present as much.

Over the months since I visited the garden, I have watched the interaction of group members on Facebook. Urs's voice is fading into the background, and there seems to be a strong collective voice shared amongst key individuals who are keeping up the momentum. Urs occasionally chimes in with offers of assistance and to facilitate relationships to assist with the garden's development, but the transition to self-reliance has been achieved, at least in the short term.

Produce from the garden makes its way into the local community through three streams:

- Kai from the māra is placed in the pātaka, and anyone can help themselves to it (other food from a supermarket, people's gardens, or other sources may also be placed in the pātaka).*
- Gardeners working in the māra take produce home with them.*
- People who might not be actively involved in the māra may also come into the garden and harvest some kai.*

Urs says that these streams are all occurring independently, "that's not formalised, but perfectly ok for people to do so". Over a year, this approach has been successful, but it is too early to say how effective this is as a stable food source for the local community.

Community gardens are frequently recognised in academic literature as effective in building community connection, ahead of being a food-producing source (Egli et al., 2016; Glover et al., 2005). Urs' connection and relatability to the people of Marfell enable him to demonstrate a high degree of care for that community. He is especially respectful of cultural needs within this location. His ability to kōrero with the significant Māori population living in Marfell and his capacity to recognise and engage with the cultural values upheld enables him to show consideration for Te Ao Māori and an ethic of care. The establishment of the Marfell māra was a pivotal moment creating connected social relationships that did not exist prior to the project. Urs has noted that new connections have formed within the community through working bees and onsite hui. This builds social cohesion between neighbours who did not previously know each other. When initiatives create such outcomes, a knot forms with food and social benefits

flowing outwards as threads into the surrounding community. This too, increases the density and coverage of the weave within Taranaki's meshwork.



Figure 5.4: Urs in the Parihaka Maara Kai. Photographer Rebecca Algie

5.2.3 The Waitoriki and Inglewood Crop Swap

Crop swaps are a produce-sharing event held within a local community. The premise is to "give with generosity and take mindfully" (Crop Swap, n.d.). Money is not involved; it is purely an exchange of produce and garden or food-related resources. It is a voluntary run initiative whereby communities in an area meet monthly. Crop swaps take advantage of both the excess produce gardeners have and the generosity of people willing to exchange or gift this surplus. With the organiser of Crop Swap New Zealand based in Taranaki, there are ten active swaps, which is substantially more than the rest of the country.

The two small townships of Waitoriki and Inglewood lying to the north of the region are predominantly surrounded by rural dairy farms and have a combined population of around 5,600 people. Their crop swap is held on the last Saturday of each month and attracts various age groups. These regular gatherings create a social opportunity for interaction and engagement with others.



Figure 5.5: Crop Swap Offerings. Photographer Rebecca Algje

VIGNETTE 3 WAITORIKI AND INGLEWOOD CROP SWAP

I was told that the crop swap day I visited in January was as busy as usual. Streams of people – many old, but plenty of younger families – arrive carrying an array of plants and produce. Upon entry, a gold coin is dropped into a bowl at the front door, which goes towards the hall's upkeep. People bring fresh produce – flowers, herbs, fruit, vegetables, plants, cuttings, seeds, preserves, a liquid seaweed fertiliser, magazines, and books (which reportedly cycle through the swap multiple times). There are valuable resources like jars for preserves, containers for potting seedlings, lengths of twine, and bundles of kindling chopped and ready for use.

People arrange their treasures, and tuck notes and descriptions amongst the bundles of herbs, wrapped up seedlings, and homemade potions. The hall tables are quickly filled, and there is an expectant air as people bustle around getting things ready, shouting out to one another, and laughing with other swappers. They examine other people's offerings, and I hear people asking questions and sharing ideas on when to prune this or that tree.

Jane, the Swap Guardian, as the coordinator is referred to, calls the group to order, and a selection of community notices are shared. She introduces our PIVOT project team, and I give a little speech about my

thesis research. I can feel the energy in the room rising, and I know it is time for Jane to let the action begin. Once the bell is rung, people are off. The pace is fast and furious. This is not a bartered negotiation – my lemon for your orange. You may help yourself to a portion of the produce, a seedling, or a cutting or two from the pile by contributing produce to the table before the swap begins.

One swapper, known as 'Leek Man', considers the nature of his local community. He explains that many residents would have previously come from large farms with extensive vegetable gardens can't always keep that up anymore, "I really like the idea of paying back something to them. So, I grow an excess, and always bring it in because people will like that... it engenders goodwill".

I spoke to swappers who are growing and sharing produce from their homelands. They are sharing how to appreciate different produce and customary food practices or rituals. One woman says, "we tend to grow things we can't get at the supermarket: we're looking for more diverse foods – chances for heritage seed and plants and things". Another couple explains, "We're wanting to grow things that you can't get in the supermarket. My husband's Italian-American. He likes arugula and chicory. Not everything is readily available, so that's a big thing for us, to have available what we, you know, choose to use".

Tensions can exist when managing practices of mindful receiving and negotiating shared values. Rules and organisation can destabilise social dynamics. Jane tells me a couple who turned up to the crop swap I attended were helping themselves but had not brought anything to share. Jane handles these situations on a case-by-case basis and with a great deal of discretion. She either explains the crop swap concept or turns a blind eye if she feels there is a need for food. This makes me think about who is not being included in this practice of swapping food. While everyone is welcome here, who may not feel they can come? What practices are exclusionary? If someone has nothing to swap, do they miss out?

Within 10 minutes of the bell ringing at the start of the swap, everything is gone. The entire set-up, swap, and clean up take about one hour in total. People have claimed produce, chosen their magazines and seeds, taken that bundle of kindling, and one little girl proudly procured the plant she had had her hands cupped around since Jane began her introductory speech. I notice a swapper who sees someone claim one of their seedlings quickly dash over to the new owner to give them tips on how this plant grows in Inglewood. I hear people laughing and catching up on local news. Kids are running between tables just as fast as the tables are being folded down and put away. Someone has a giant broom, and the hall is swept out.

The donation collected upon entry will be forwarded to the hall committee. Jane tells me it is being used to fix windows, paint exterior

frames, and contribute towards a new kitchen, "this is the centre of the community, and the school uses it a lot, but it used to be really run down. [We've put a] new roof on... I mean, a lot of money is being put into it, so they [school community] say it's a by-product of the swapping".

What people have taken is not going to keep them provisioned till next month, so I am curious as to why people participate, and I start chatting to several people as they leave the hall about what they have swapped today and why they come.

The most frequent reply to my question of why people come is to share with others. Ostensibly this is produce and resources, but what I realise is that they are sharing friendship and knowledge too. Moreover, perhaps it is a place for some to come specifically to feel connected and catch up with other people in a social setting. The ritualised habit of monthly swap cycles creates a rhythm in the community. One of the swappers says, "it's a very social event... and we have a shared meal at the end of the year between Christmas and New Year".

Shonagh, from a rural location nearby, invited the PIVOT project team back to her large property after the crop swap. Shonagh shares here property with chickens, ducks, geese, herbs and countless plants, fruit, and vegetables. She told us how this group of crop swappers managed during COVID-19. Many were entirely self-sufficient or could be, through the connections made at crop swap. Eggs and milk were contactlessly delivered or made available. The practice of crop swapping is about an action of caring through reciprocity.

The act of crop swapping resocialises food by creating alternative ways for participants to relate to each other as growers, communities, and eaters. Crop swaps are spaces of ethical values, care, and social connection as well as a source of local food. Swappers have feelings of appreciation for homegrown produce and create social meaning through their acts of sharing. This demonstrates an act of care for people – placing it within a moral economies model.

In effect, a crop swap becomes a knot within a meshwork of food sources drawn from hyper-local backyards, creating food sources in addition to mainstream food supply systems. This was demonstrated during COVID-19, when rural families and households separated by distance remained connected through the contacts established (threads) through interaction at crop swap. People were

generous and caring, looking out for one another and contributing to and enhancing community resilience. By doing so, crop swaps provide important knots of food exchange, threads of the food movement, and weave created through robust and resilient localised food systems.

5.2.4 Beach Rd Milk Kiosk and Kaitake Farm

The *Beach Road Milk Kiosk* is an innovative direct-to-consumer food retailing site located on the street frontage of a wholly organic and regenerative farm. The Kiosk is a retail outlet for Beach Road Milk's A2 raw milk, supplied through a user-operated vending machine. Several producers are working in collaboration to sell their produce from the Kiosk as well. There is an array of organic vegetables from *Kaitake Farm* (another local small-scale grower), bread, avocados, honey and jams, free-range eggs and berries from other local growers.



Figure 5.6: Beach Road Milk Kiosk. Photographer Rebecca Algie

Beach Road Farm and the Kiosk, owned by Megan and Ryan, is located strategically on the urban periphery at the edge of the suburbs of Spotswood and Whaler's Gate. They are minutes away from a sizeable Countdown supermarket, just off the main highway connecting several popular coastal and rural communities in this part of the region. It is easy to access from the main highway in either direction and is signposted and visible.

VIGNETTE 4 BEACH RD MILK KIOSK and KAITAKE FARM

I set myself up for a five-hour shift of observations on a hot sunny Friday in late January at the Beach Rd Milk Kiosk. I sit on the steps and watch a consistent and steady stream of people pull into the carpark. During my shift, I note at least 36 transactions from individuals and groups of all ages, but primarily pākehā, coming for milk. They tell me they reckon it is "good value for the quality" they are getting.

I speak with farm owners Megan and Ryan, querying why they produce A2 milk and how the kiosk model works. Their key motivation is to produce whole milk, which is 100% organic, easily digestible, and without the regular environmental impacts of traditional dairy farm production. They have transformed a 3rd generation traditional family dairy farm into a RA model. "It's an intense job," says Megan. She and Ryan put in a lot of hard work constantly. From researching vending machines and managing the transition to regenerative farming, producing raw A2 milk necessitates time and effort. The milk is loaded into a dispensing machine. Tokens and sterilized bottles are available in a further vending machine.

Kaitake Farms, the next biggest seller at the kiosk, sells their produce through both an online digital honesty box, and a traditional-style Kiwi honesty box. This creates a bit of effort for shoppers to make sure they have sufficient change for the various other seller's honesty boxes. I wonder how Covid-19 has affected the use of cash at this site. The day I am observing, people are armed and ready with change, and no hassles are evident.

I ask customers why they choose to shop here, and they reply with health-based reasons, the "satisfaction of choosing healthy food". Most families drink at least a litre per day of the A2 milk, primarily because of its taste. People say they are keen to buy it because of its purported health benefits, lack of added extras, and the fact that it is A2 milk which is more easily digestible by humans. All the people I spoke to were regular shoppers, coming to the kiosk since it opened or "for ages". The customers say they like to support the business because it is local, and so are the other small-scale suppliers who offer produce at the Kiosk. I noted that at least $\frac{3}{4}$ of the customers purchased produce in addition to the milk. A few comment that the Kaitake Farm produce is a bit expensive, but most people identify that it is a premium product which is organic, spray-free, local, fresh, and healthy and therefore accept the price or do not purchase because of that fact. Some people grow their own vegetables, so they are not focused on purchasing those from the Kiosk. However, all customers are choosing the kiosk in addition to supermarkets or other sources.

The Kiosk has a large carpark with space for shoppers to pull in outside the door. It is easy for people to park, recycle their bottles, dispense

their fresh milk, and purchase other items. Shoppers say it is "super easy and convenient" to make this stop a part of their daily routine. A few tell me they drink far more milk now because of the taste and health properties, and they say it has become a core component of their children's diet. They say this would not be the case if they were drinking regular milk from the supermarket.

While I imagine the volume of produce traded at the kiosk does not compare with that of a supermarket, it is enough to support Kaitake Farm financially. It is one of a very small list of distribution points for them – they travel from the neighbouring community three minutes away to stock the kiosk. Toby from Kaitake pops in to restock his fridge and shelves with produce while I am there. He tells me that he sends out a text when he is on his way from the farm to the kiosk, and often people are waiting for him when he arrives, and he cannot even get his produce onto the shelves. Their business is flourishing, and I know from previous conversations in June 2020 with co-owners Ryan and Toby that the volume of sales has combined with the scale of their land and labour so that "we've found the sweet spot". Like all growers I talked to, they have optimised their scale and looked for the most basic model that is effective for them. At first, there were challenges with the Kiosk, but the operation is working smoothly now, and over 90% of what they produce on their ½ acre (0.2 hectare) market garden goes to the Kiosk. Like all the SSGs in my research, Ryan and Toby's market garden and lifestyles are focused on "living lightly, reducing emissions, and living simply".

It is most unlikely that the kiosk is the only food source for customers, but it does appear to be a habitual source of food for some. The feasibility of this alternative retailing model suggests there is a viable niche in the food system for providing regeneratively produced food through such marketplaces. The accessible location of this Kiosk plays a large part in the success of this form of retailing.

This retail space provides another example of food resocialisation. Firstly, the direct relationship between the grower and the customer. Despite the kiosk being essentially unstaffed, Kaitake Farm, other growers and Megan or Ryan are in and out of the Kiosk daily and are well-known by their customers. The customers shared that they feel connected to the producers, and therefore one could even argue, connected to the land and produce. The customers' appreciation of produce grown or farmed regeneratively connects them to the produce on a more intrinsic level. This represents McMichael's notion of 'food from somewhere' (2009), and a more-than-human ethic of care for people and the planet. Once again, the kiosk acts as knot within a meshwork creating

threads of connection between a range of consumers from both local communities, but also those further afield who choose to access this produce. This commercial marketplace creates a point of difference, but still enhances the weave of regenerative produce in Taranaki.



Figure 5.7: Kaitake Farm Restocking the Kiosk. Photographer: Rebecca Algie

5.3 CONCLUSION

The vignettes above provide insight into the activities of some of the growers that my research has focused on. These growers demonstrate caring values through their practices, actions and words. This showcases how diverse approaches to selling, swapping, or gifting produce provides food to eaters in alternative ways to the global food system. These findings will be discussed and analysed in the following chapter.

CHAPTER 6: CARING PRACTICES - FINDINGS

*“Good food²² itself may not change the world; but the embedding and socializing processes it initiates at small scales create openings to both hopeful political geographies and materially effective economic geographies”
Carlisle, 2015, p. 2.*

6.1 INTRODUCTION

Through ethnographic participation with SSGs, I have sought to capture how growers are resocialising food through practices of care. This chapter summarises my findings of the four vignettes above as well as observations relating to other growers and initiatives I was given access to (Appendix 1). My findings provide examples of social relations in practice and reflect Tronto's notion of care (2015), and Carlisle's articulation of moral economies within an AFN (2015). By exploring these relationalities, I consider the impact of these values within a local regenerative food system as a meshwork of shortened supply chains. In the following analysis, I have identified six key themes of care: care for the environment, care for animals, care for growers (themselves and their colleagues), care for eaters and the community, care for Te Ao Māori, as well as consideration of the social connections captured in this meshwork.

6.2 CARE FOR THE ENVIRONMENT

From my research I learned that SSGs have a strong vision about why and how they are growing the way they are. Almost universally, this community has ideological motivations to improve the soil and grow nutrient-dense food. Characteristic of this, business partners Ryan and Toby's market garden *Kaitake Farm* is successfully achieving their goal of a balanced lifestyle and a business that enriches both the environment and their consumers diet. By caring for the

²² The notion of good food can of course be read subjectively, and food has many more meanings to people than just good or bad. However, this quote speaks well to the importance of the social processes associated with growing, processing, distributing and eating food.

soil, Taranaki's growers feel that they are caring for the environment because they use increasingly regenerative principles such as low to no soil inputs and avoid tilling to protect soil structures and improve below ground biodiversity, water, and airflow.

These goals were observable across all growers I visited, and feedback from the soil workshop demonstrated how vitally imperative caring for the soil is to them. Regenerative dairy farmers, Megan and Ryan of *Beach Road Farm*, commented that "healthy soil creates healthy pasture and therefore healthy cows". These farmers therefore care first for the soil (personal communication, January 29, 2021). Workshop speaker, Jules Matthews of *Integrity Soils*, explained that, "while we are looking to become better growers of abundant food, we're not ever going to feed the world, but people need to learn how to feed themselves again" (Matthews, 2020, p. n.p.).

SSGs are essential components in regenerative systems as they have a predisposition towards environmental improvement and zero-waste circular systems. They are keeping seed saving alive, enhancing crop diversity and improving seed vitality. Crop swappers and seed savers in particular, are focused on diversity and protection of heritage species. Growers are resourceful and proactively reuse and recycle wherever possible. Grower Simeon from *Puriri Farm* is driven to eliminate waste and repurposes materials and resources to support his endeavours. He creates biochar from hundreds of disposed Christmas trees and has repurposed waste materials to create tools such as his fish hydrolysate application machine (Figure 6.1). SSGs are able to easily adapt and instigate changes to their land and practices due to their small-scale nature.



Figure 6.1: Simeon and his Fish Hydrolysate Spreader. Photograph: Heidi McLeod

A key consideration for Taranaki growers is how food can be moved around the mountain and sold where it is most needed, without putting undue stress on growers working in outer-lying areas. For some, farmers' markets and other retailing places are too greater distance for them to participate in. Michelle of *Goldbush Micro Farm* is in this position, situated in the far north of the region. Like other SSGs, she is committed to environmental considerations and says travelling great distances to sell produce does not fit her ethical values. Nor does changing her business structure, scale, or practices to conform to other ways of distributing. For this reason, she has opted for a garden box delivery business that can be implemented locally. She has been doing this for several years now and has high demand for her produce. She has now been able to leave her corporate job to commit fulltime to *Goldbush Micro Farm*.

6.3 CARE FOR ANIMALS AND THE MORE-THAN-HUMAN

Inherent to an ethic of care and the AFNs literature are the more-than-human relationships that can exist between people and the non-human. The care growers show for their soil and animals are examples of this relationality. It reflects

a deep consciousness of the role and function within an ecosystem involving more than just people. At a crop swap I identified many different forms of care, including care for ecological diversity by keeping heritage species alive, or the supply of foods not typically stocked at supermarkets. Crop swapping enables people to grow and share what is meaningful to them, therefore they remain connected to their cultural heritage.

The guardian²³ from the crop swap I visited share that there is somehow always variety. People differ, but so does what they grow. The hall is another more-than-human example and it has become an important site within the community – a place of meaning for swappers, a place of interaction, celebration and connection. By using the hall, swappers connect with their community, and by visiting the swap regularly, swappers are contributing financially to upkeep the hall and to a sense of community.

This research looked chiefly at growing fruit and vegetables; however, I also looked at the innovative *Beach Road Milk Kiosk* site, which sells raw A2 milk and a variety of fresh produce from surrounding growers, notably *Kaitake Farm*. Megan and Ryan, who operate the *Beach Road Farm* and the *Beach Road Milk Kiosk*, converted their 3rd-generation dairy herd from regular stock to A2 milk-producing cows. I approached farmer Ryan about my research, and he responded passionately, describing his cow herd and how he is focused on being a guardian of the land. He farms according to bio-organic principles only applying organic fertiliser. Contrary to most dairy farmers, he is not trying to increase herd size nor increase milk volume. His priority is on making the environment better and providing the best possible milk. Excited about what he was doing, I asked if I could visit the farm. He was hesitant. The cows needed to be kept calm while milking to prevent contamination from cow manure, which would necessitate dumping the spoiled milk. Cows are sensitive to changes in their environment, and Ryan's consideration demonstrates a high-level of care for more-than-human connections on his farm.

Toby and Ryan, and Megan and Ryan's customers appreciate the rationale behind regenerative growing or farming. They say "it tastes great", they like the

²³ Each Crop Swap Co-Ordinator is referred to as a Guardian.

"satisfaction of choosing healthy food", and consider the produce good value for the quality they receive. Most importantly, they support *Beach Road Farm*, *Kaitake Farm*, and other local producers because of the care they shown for the environment and animals.

6.4 CARE FOR GROWERS - THEMSELVES AND THEIR COLLEAGUES

Taranaki's growers demonstrate a significant degree of generosity and reciprocity with knowledge and expertise widely shared. Many of the growers I studied explained that they were largely self-taught, opting for online research through media channels such as *YouTube*, trial and error in their gardens, or working with others who have travelled the same path. Mary researched permaculture options for her backyard and was inspired by a permaculture tutor. She adapted her plans further after time spent with Carl of *Freeman Farms*, who shared lessons he had learned when setting up his urban farm. Sharing knowledge and helping others demonstrates the care and commitment the growers have for what they do.

Volunteer labour enables Maria to tackle projects that require an extra set of hands, as Maria, like other growers, usually works alone. In return, volunteers or other growers gain skills, knowledge, company, and restorative wellbeing through time spent working collaboratively. This reflects an ethic of care towards others. Working in her garden for long days out in a rural community limited her social interaction, so prioritising values of wellbeing for herself means encouraging opportunities to work with others.

The SSGs I talked to have adaptive and responsive practices, which continually improve their growing techniques. They are resourceful and good at improvising and developing smart solutions to problems faced. Cecily of *Thula Greens* has spent a lot of time developing an effective 'bubbler' washing and drying station for preparing her microgreens for sale. Such equipment is not easily obtainable. She developed a growing calendar that correlates seasonal temperatures, volume, weight, and the soaking of each seed in order to manage a cycle of sowing, growing and harvesting. Cecily was willing to share this information with others when I asked if she would host a grower's workshop. This demonstrates

goodwill growers have for each other, and their willingness to help each other do better for the collective benefit of small-scale regenerative gardeners. Mostly, they are keen to share knowledge with others, reflecting an anti-competitive sensibility.

The growers I met are predisposed to collaborating, collective action, and creating a connected network. They are working towards achieving a state of 'collaborative autonomy', supporting common aims and working together while retaining autonomy over their individual enterprises. Following the PIVOT Long Lunch, Maria was buoyed by conversations and interactions between lunch participants. She immediately convened an open-invitation social get-together for participants and growers not able to attend the lunch to carry on the day's discussions. She was keen to look for opportunities to strengthen their sector and tackle regional issues, such as moving produce around the region.

Growers are sensitive to their environment and work to improve their ecosystem and interactions within their communities. Growers also consider what others are producing and offering, to ensure they are not eroding each other's market share. At the marketing workshop the PIVOT project hosted, there was discussion around what additional crops and volumes of crops required in various markets. Like Maria's hyper-local collaborations with neighbours to produce grocery box schemes, the Taranaki growers are working together to develop their sector.

SSGs showed me they are motivated by the pursuit of hauora wairua, the physical wellbeing and prosperity that comes from a life balanced with income earning potential and feelings of spiritual wellbeing, a connection to nature and a desire to be personally healthy through eating high-quality food. This was a key motivator for Simeon who left his full-time job, sold his house and relocated to the urban periphery. This provided space to innovate and explore ways of reducing waste, maximising soil health, and enhancing the nutrition values of the food he grew and ate. Ironically, growers operating at the least commercial end of the spectrum are at most at risk of burnout from their labour-intensive model. Maria frequently mentioned that she is challenged at her age, with what she can achieve single-handedly on her rural property. Research suggests this can be a significant risk factor in this sector (Hoare, 2019). Michelle of *Goldbush Farm* and many other SSGs have developed gardens and chosen produce that they can

manage and tend to according to the labour and resources they have available to them. However, several growers mentioned that growing could easily be a 7-day job and that 'you can't be in it for just the money'. For this reason, most of the growers I interacted with created the perfect scale for their venture, taking on what they can manage with the resources available to them.



Figure 6.2: Maria at the Long Lunch. Photographer Tran Lawrence

6.5 CARE FOR EATERS AND THE COMMUNITY

SSGs demonstrate care by providing ethically grown food to hyper-local communities. Growers create strong personal connections, developing relationships and support systems that assist whānau and communities to eat well. This was demonstrated to me by talking to swappers at the crop swap I visited. The swappers could easily keep themselves provisioned during COVID-19 lockdowns with produce they grew themselves or could access from neighbours and through connections made at crop swaps. By establishing caring relationships, the swap community creates resilience in their community.

Through Maria's participation in workshops, at local events, and through an active social media presence, Maria is well-known and liked. She is a significant collaborator and community builder within the region, creating an ethic of care towards her community, the people she feeds and interacts with, and the SSG community she is a part of. She is proactive at generating activity and is often thinking about how to improve what she and the region do to build a regenerative food system for local communities. Workshops are a big part of Maria's offering. When she began gardening, she used workshops to access information and skills needed. Her rationale was that other people must be interested in this too, so she advertised her workshops, engaged specialists, and created convivial social settings for people to connect and learn something new. This made it affordable for her to access information and helped her create relationships with people in her newfound community. She always provides a meal and allows plenty of time for socialising and connecting with people at her workshops. In this way, she is helping build a community and connect people to healthy food and ways of growing food regeneratively. Workshops, crop swaps, and farmers' markets bring rural people together, reduce social isolation, and unite people with shared values and interests. This adds to the community's sense of identity and place.

Several growers pivoted during pandemic lockdowns from selling through local farmers' markets to providing contactless delivery of produce boxes to customers. Demand for locally available produce increased and new distribution and sales strategies were created. For example, Maria told me:

I started to earn money once Covid hit... Covid's really been my year, been really successful. It's been the springboard to being local, really local... and starting to meet people who are committed to supporting local growers, you know. You're working with them, and they've like been with me nearly a year (personal communication, January 28, 2021).

Stemming from relationships built through the local *Urenui Farmers' Market* where her produce was initially sold, Maria has continued to strengthen relationships with her customers who specifically seek connection to Maria, her food, land, or

place. These commonalities in values between customer and producer are critical drivers for Maria. Through her grocery box delivery scheme, Maria contributes to many values of care. Firstly, to her consumers who are purchasing high-quality local foods. She grows food that tastes excellent, is spray-free, and grown with environmental regeneration in mind, making people feel good about the food they eat. While she does add a small margin for the convenience of delivery, she uses the cost of a cup of coffee as a measurement tool for her pricing. This yardstick rationalises a reasonable charge for a bag of apples or greens. She is not charging a premium for her produce nor her deliveries.

At the same time, Maria provides care to her rural neighbours from whom she purchases additional produce. She adds these to her grocery boxes, increasing the range and volume of produce she can offer while also providing important microeconomic stimulation to her neighbours within their hyper-local community. This bolsters the incomes of others in her area and may encourage further regenerative food production on their properties. This creates social values and benefits in the form of income, social connection, and a feeling of usefulness to her neighbours.

SSGs and the ethic of care typified in a regenerative food community contribute to increased healthy food access and food security for people experiencing higher levels of need. This helps to address issues of equity that vulnerable groups in society experience. Several small-scale regenerative growers readily acknowledge a need for healthy food in these spaces and work collaboratively and proactively to share skills or produce to meet the existing demand for healthy food found in Taranaki. This was evident at the Marfell Community Garden, and through the work of Waitara-based educator and grower Pounamu, where distribution of food at no cost is a vital outcome of efforts by the volunteers in the gardens and who stock the pātaka kai. Similarly, at crop swap, I observed coordinator Jane sensitively managing the needs of those who could not provide produce nor resources to swap and yet needed food. These acts of care demonstrate an ethic of social justice and a collective sense of responsibility.

The commitment to long-term wellbeing through learning the skills of growing your own food and the practice of sharing food was highlighted to me in Maria's

school project. Maria worked with a local school to make them 'seed guardians', which aimed to teach children how to grow food, preserve seeds, and use seed in multiple ways. This contributes to localised expressions of food security and sovereignty. Maria started with only 12 bean seeds, sowing eight seeds at school with the children and four at home as a backup. Maria and the students nurtured the plants, and each bean plant went on to produce around 100 beans each for storing (to use as seed stock and to consume as a dried pulse), cooking, sharing, or eating fresh. The project created a ripple out into the school community as students embraced learning and sharing gardening skills with their families, developing community resilience through the protection of food supply, and valuing kai for its ability to feed in an annual cycle of regeneration. Several schools have engaged in this idea of seed guardianship, creating an ethic of care for food through protecting heritage species (food sovereignty), or indeed any species, as a way to continue producing your own food at minimal cost (food security).

Crop swaps create an opportunity for participants to develop their skills and knowledge of different produce and gardening, creating connections to food, the environment, culture, and diversity by virtue of the people and produce present at the crop swap. Those I talked to were all regular visitors who actively engaged in practices of growing, producing and sharing food. This act of swapping is a social act of 'commoning'²⁴ - the actions and practices of individuals growing produce supports a collective – the local community. Crop swappers are motivated to grow abundantly and are naturally inclined to share, creating hubs in a sharing community economy that benefits more people within a community (Gibson-Graham, 2008).

6.6 CARE FOR TE AO MĀORI

Throughout my research, I developed connections with an emerging subgroup of small-scale growers within Māori communities, where growing local food for whānau is being revived. Initiatives in this space were progressing for a key stakeholder, Pounamu, which enables the expression of tikanga Māori. These are

²⁴ Commoning refers to the communal sharing of resources.

socialised practices of care that create spaces for Māori expressions of culture and kaitiaki and enable connections to wairua and whenua. Food security is important in the Taranaki region, and Pounamu is working with Māori communities in Waitara to practice traditional skills of maramataka, mahinga kai and tiaki māra. Establishing this knowledge ensures those that experience challenges to food access and equity can relearn forgotten skills, reconnect to their whakapapa and whenua, and grow traditional foods and medicines to feed and care for their whānau. I was deeply moved by seeing and feeling this in action at *Katere ki te Moana Marae* with Glen Skipper, who has engaged his community to regenerate heritage varieties of kūmara that are indigenous to his hapū. The practice of growing kūmara is not just one expression of culture; it extends to much more profound levels of care as the hapū reconnects to ancestral lands and stories of their people and histories experienced, often painfully, by iwi.

Considerate users of land in Taranaki acknowledge and respect the tangata whenua. This means considering the impact of colonisation and land displacement in this place. Painful memories continue to frame the mindset of many people. Decolonising space and democratising food is a key element in terms of demonstrating social justice for people and food in the Taranaki region. For the Māori gardeners that I spoke to as part of my research, understanding and appreciating the significance of what has happened on their ancestral lands is still an essential aspect of how they view and connect with the land today. Therefore, recognising and acknowledging the history of land grievances and ongoing settlement claims and ideology is essential when considering land use in Taranaki. Re-establishing traditional land-use practices such as maramataka and hua parakore, and growing produce such as heirloom kūmara that is not typically found in supermarkets or at farmers' markets is important to decolonising space and democratising food. Urs shared the Te Reo Māori language garden at the Parihaka Maara Kai with the PIVOT project team (Figure 6.3). Only Te Reo can be spoken when working or entering this part of the garden, creating an opportunity for Māori and non-Māori to connect with significant cultural sites in Taranaki and respect Māori practices.



Figure 6.3: Urs in the Te Reo Maara at Parihaka. Photographer Rebecca Algie

6.7 CARE CAPTURED IN THE MESHWORK

Meshworks are a way of representing a networked space of caring relationships established through intersections of knots and flow of threads, which create a weave. This interlaced network recognises different social actions and impacts that combine to create a mesh that can be seen to cover a physical space. The AFN created by Taranaki's regenerative SSGs can be pictured spatially to show how food access is created by this localised or regionalised food network. Taranaki's meshwork threads are made up of shortened food chains, such as Maria and Michelle's produce delivery boxes, and Carl and Cecily selling direct to cafés and restaurants. Knots are identifiable as growers like Melissa and Carl selling their produce at farmers' markets or through 'collaborative retailing' by *Beach Road Farm* and *Kaitake Farm* at the *Beach Road Milk Kiosk*, or of Simeon and Taryn making informal direct sales.

These practices are examples of shorter food supply chains that do not rely on industrial-scale processing, packaging, distribution, and transportation. Produce is harvested, washed, sometimes packaged, and then delivered. These threads of food distribution around the mountain are shorter than those observable in modernised global food systems, shortening the distance to a much more localised level. There is a thread of moneyless food exchange or provision through community gardens, crop swap events, and contributions to pātaka kai or food rescue. These also contribute to a spatial flow of food within the region, increasing food access for less food-secure people. These particular sites are additional knots within the meshwork. Mary is an excellent example of the minutiae of care within a meshwork. Her home-based operation is very relaxed and informal, and she explains that she prefers to give her produce away, although she had considered an honesty box at her gate. This hyper-local food provisioning provides a small but valued knot in a localised food meshwork.

The early endeavour of Carl within the PIVOT project was to encourage people to re-establish backyard gardens as small urban farms to create localised food production spaces. Carl specifically sought to test the *YouTube* meme that you could reimagine a ¼ acre section (0.101 hectares) as a productive 'urban farming' space to support a family with produce and income through farmers' market sales (Freeman, 2018). Carl achieved this goal and received much media attention. He holds a vision that every neighbourhood or street should contain such an urban farm to feed hyper-local households, making families or even whole communities self-sufficient. These sites also become knots in the meshwork. In combination, the knots and threads produce a weave of caring food provisioning at a local level, demonstrating the number of knots and threads, and therefore the tightness or strength of the weave in a particular location. This can indicate how food secure a region is through local regenerative producers.

6.8 CONCLUSION

The examples of care discussed in this chapter create a regenerative caring food system and a meshwork of alternative food sources. The meshwork shows knots of food production, and distribution threads indicating the flow of food from origin to eater. As these knots and threads grow in number, the weave of the meshwork becomes more interlaced, demonstrating how local food systems

become connected. The Taranaki SSGs meshwork is made up of growers who are creating social outcomes through a diverse and resilient localised food system. Whether this can embed itself within the global food system is a question yet to be answered.

CHAPTER 7: DIVERSITY AND CARE IN A LOCAL MESHWORK - CONCLUSION

*"It matters where food is produced, where food is consumed and how it gets from plant or pasture to plate"
Hopma & Woods, 2014, p. 773.*

The SSGs I studied did not label themselves as 'regenerative', nor any other type of growing. As cottage industries, they are not bound to subscribe to any type of growing either. They are on a journey of self-improvement in terms of their environmental practices. All were utilising a combination of practices and approaches that are regenerative in nature. The literature showed that although a definition has not been firmly established, RA is considered a process of thinking and 'becoming' through environmental and social regeneration. Analysing what I observed and comparing this against the literature reviewed, I have concluded that Taranaki's SSGs are regenerative growers.

A number of theories such as ethic of care (Tronto, 2015), moral economies (Carlisle, 2015; Jackson et al., 2009; Morgan, 2015), diverse economies (Gibson-Graham, 2008), and meshwork (Pavlovich et al., 2021) have all provided useful platforms to consider the socialising practices utilised by the growers studied. All growers demonstrated ways of improving social outcomes, which differentiates them from some larger or mainstream food producers, and showcases how SSGs create a meshwork of social connections and ethical responsibilities in the region. This resocialisation of Taranaki's local food system, has assisted improvements in the ecosystem through care of the soil, care for biodiversity, care for animals, plants and the more-than-human.

In addition, the resocialisation of food they are engaged with influences their values and actions in relation to economics, politics, culture and social facets of life. The growers' sense of identity is prevalent in the way they are motivated to pursue hauora wairua which, as they shared, comes from a life balanced with income earning potential, social justice for others, feelings of wellbeing and a connection to community and nature. This places their endeavours within the framework of a moral economy which requires moral values to be put into consideration with economic goals.

By examining food regimes theory (Friedmann, 1993; Goodman & Watts, 1997; McMichael, 2009), as well as the global food system, commodity chains, and by observing the practices of Taranaki's SSGs, I have seen how these growers fit into a localised level of food production. This benefits themselves, local eaters, and the environment through their caring alternative approaches to food production and distribution. The literature considered in Chapter Two suggests that to ameliorate some shortcomings within the global food system, it is necessary to prioritise different values and outcomes. The global food system is characterised by long global commodity chains and dominating transnational corporations with powerful network connections, whereas AFNs are characterised by short commodity chains, minimal to no corporate structure, and a network based on autonomous yet also mutually beneficial relations. The actions of Taranaki's SSGs will not replace the capitalist paradigm of the global food system nor the power of the dominating agri-food businesses, however it is an active AFN that provides a genuine alternative to the mainstream.

My research shows that the socialisation of regenerative food incorporates significant social and environmental norms and values. By resocialising food, growers are providing an important ethic of care which supports food security and food sovereignty. In Aotearoa, local food sources are important for food system resilience by contributing to food security; and cultural considerations are fundamental to growing food and contribute to food sovereignty. I saw that a well-socialised food system provides diverse and nutritious food that can be offered affordably due to the low overheads of SSGs. Finally, knowing where food comes from and how it is produced connects people to food and increases their awareness of the importance of a food system that delivers the best outcomes for people and planet. It is not possible to say that a national scale enterprise or industrial agriculture could not do the same. But, SSGs have more scope to pursue alternative ideals of profitability and productivity.

It has not been demonstrated that the mahi of these growers is sufficient to alter the global food system; however, most growers are focused on augmenting existing patterns of food production. Currently, there is insufficient regulatory support to encourage growth in this sector, especially for those SSGs operating purely to produce food for vulnerable communities experiencing food

insecurity. The poor fit of economic and political instruments, such as funding and policy for SSGs, limits the ability of a regenerative caring food system to flourish. Such socio-economic parameters impose values of what is worth aiming for; demonstrating how particular agricultural approaches can normalise particular practices. This then flows on to influence how the state or sector regulates or intervenes on the industry's behalf. Fortunately, the Ministry for Primary Industries has recognised that regenerative farming can increase sustainable futures and is seeking to scientifically quantify the impact this might have on the sector through research projects currently being tendered (Ministry for Primary Industries, nd).

Through my research, I have shown how Taranaki's SSGs create a regional meshwork that focuses on relational connections through practices of care. In particular, the attentiveness of growers to caring for the environment and for people, the responsibility they take for growing differently to mainstream agriculture, and the competence they provide by adapting their gardening practices demonstrates their responsiveness within the care-exchange process of the communities they operate within (Tronto, 2015). The Taranaki growers operate with plurality, providing solidarity and collective responsibility to their sector and to the wider community (Tronto).

Growers demonstrated to me examples of how they provide produce to local communities. This ranged from food donations, community grown produce for community consumption, crop swaps, grocery box delivery schemes, farmers' markets, direct sales, and creative retailing. These examples highlight how growers balance profit-making against other self-identified goals, such as social connection with customers, a sense of social justice, an ethic of care, and fewer environmental impacts. Community gardens, particularly ones in communities of need, showed me that they practice social care. One of the key outcomes of community gardens is to generate produce to feed people at little or no cost. The community-run Marfell māra exemplifies Gibson-Graham's (2008) non-market model of alternative capitalism. Unpaid labour provides benefits by redistributing produce to volunteers and eaters.

In Aotearoa, Reynolds et al., (2020) link economic class and neoliberalism to the cause of economic marginalisation of specific communities. This exacerbates

existing inequalities and creates new vulnerability to food insecurity. I visited gardens such as the one in Marfell, which helps reduce these insecurities. As long as the garden remains active, productive, and effectively managed, it will continue to produce food and social connectivity for the community. The māra is creating relationships through food for the people who need it most, democratising food (James et al., 2021), and creating access and self-reliance for people in this suburb. This reflects what Veen & Dagevos (2019) explain occurs when "people voluntarily share skills and labor, based on intrinsic, more-than-economic motives and including values such as social relations and communality" (p. 2). It also speaks to Tronto's fifth ethic of care – plurality. As Taranaki communities pull together to improve their knowledge and access to food, they also strengthen community ties.

I found that literature around AFNs highlights the need to broaden economic activity, rather than assessing the ability of AFNs to dismantle the global food system or challenge capitalist-centric frameworks. This mirrors the ambitions of Taranaki's growers, although they were keen to see more use of regenerative practices in mainstream food production. However, the growers do achieve a broadening of food access options in Taranaki. What I observed at crop swap was an example of an AFN that creates new sites and spaces for localised food provisioning, access, and exchange. Crop swap is providing economic diversity at the same time as generating positive social outcomes and wellbeing for the community.

The defining characteristic of a moral economy (Carlisle, 2015) is the prioritisation of environmental and social values within economic transactions, which I have expressed through Tronto's ethic of care framework for people and the environment. I observed these values guiding growers' practices ahead of productivity or profitability. Based on successive conversations and observations, it became abundantly clear to me that these growers have a clear vision about why and how they are growing food the way they are. The growers have ideological motivations of regeneration - to improve soil quality and grow nutrient-dense food that benefits growers and eaters. This was expressed through the events and workshops growers participated in during my research, as well as being demonstrated through their actions. They showed me they are highly motivated by environmental, social, and cultural values, which determined their

day to day growing practices, for example, no tilling of land, favouring mixed cropping, utilising maramataka and hua parakore, freely distributing the surpluses to pātaka kai or food recovery operations.

The growers proved themselves to me to be highly aware of the environmental issues created by conventional farming practices such as water contamination, erosion, and greenhouse gases. Therefore, they choose environmental practices which sequester carbon, eliminate toxic inputs to the soil, and improve soil and plant health in general. I also noticed growers frequently talked in different ways about what they were doing on their land and how they defined what was profitable or successful. Proponents of modernised agriculture will measure and consider crop yield, market share, or market value of the produce or land, whereas Taranaki SSGs measure productivity differently based on their additional social and environmental priorities and values of care.

When considering some of the negative consequences of a global food system, I found that a regional meshwork provided a valuable lens for showing the reach and coverage of Taranaki's growers. A meshwork reflects the relationality of a system, it shows how care is extended across and within place. The relationalities of SSGs provides a way to understand the socio-spatial patterns and flows which support the structure of a food system in the region. Typically, SSGs may look relatively individualised, or like insignificant operators when compared to more organised, modernised farming systems. However, the meshwork demonstrates an impact that was much more integrated and connected than expected, proving that SSGs' influence is greater than the sum of their parts.

By providing produce to local communities, growers create social connections based on direct relationships developed through alternative distribution and marketplace options. These represent the knots in the meshwork. The movement of food represents threads, and the overall weave of the meshwork refers to the density and strength of the food system. The more knots and threads, depicting more growers, sites and connections, the more robust the AFN. I picture the meshwork effectively blanketing the region, adapting to the topography and interacting with successive layers of the globalised food system.

Taranaki's SSGs exemplify positive contributions to the environment, communities, and food production within the region. If more can be done to recognise and prioritise the social benefits of concepts such as an ethic of care and meshworks, the more likely we are to achieve food resilience within Taranaki.

7.1 FINAL FOOD FOR THOUGHT

Operating in Taranaki amid a strong dairy farming sector, the niche that growers in this research project are occupying engages the land in different ways. They are reimagining the notion of Taranaki as 'dairy farming land'. In contrast, mainstream farmers who have spent decades refining their practices, embrace technology and modernisation to maximise their production of dairy, meat and fibre. Their motive to 'feed the world' evolved from colonial settler relationships with the British Empire. In Taranaki, the focus and scale of food production is driven by dairy farms producing for international export rather than local consumers. This represents a theoretical tension between localised regenerative small-scale food production and industrial farming, particularly in relation to the use of RA, but also in terms of scale, profitability and value comparisons.

The strength of Aotearoa's farming identity, the size of its operation and the scale of employment all overshadow the actions and impacts of SSGs. SSGs cannot produce enough food for the country to eat, nor enough jobs and income to sustain the population in the same way as New Zealand's farming sector. However, this is not the goal of SSGs nor alternative food networks. The fundamental problem is how to improve local food resilience and social connections to food.

Taranaki's SSGs are focused on feeding local eaters, putting them at the opposite end of the scale to much of New Zealand's mainstream farming. Currently, farming has a clear focus on export markets rather than local markets. I have noted that Aotearoa has no measurement of how food secure a region is; however, extensive export data is collected and reported, demonstrating the farming sector's value to New Zealand's GDP.

This area requires further research to quantify and qualify the need and impact of regionalised meshworks in Aotearoa's food system. In addition, more thought needs to be applied to the role of Big Food and the global food system with regard to food security, food sovereignty, and a moral economy framework that takes a more-than-money approach to provisioning New Zealanders by food producers both big and small.

REFERENCES

- Adds, P. (2017). Story: Te Āti Awa of Taranaki. In *Te Ara—Encyclopedia of New Zealand*. <https://teara.govt.nz/en/te-ati-awa-of-taranaki>
- Agnew, J. (2015). The new global economy: Time-space compression, geopolitics, and global uneven development. *Journal of World-Systems Research*, 7(2), 133–154. Directory of Open Access Journals. <https://doi.org/10.5195/jwsr.2001.167>
- AgScience. (2020). *Special issue on regenerative agriculture* (No. 57). <https://indd.adobe.com/view/693a575a-5482-4df0-bc4d-f986d3bce648>
- Allen, P. (2010). Realizing justice in local food systems. *Cambridge Journal of Regions, Economy and Society*, 3(2), 295–308. <https://doi.org/10.1093/cjres/rsq015>
- Araghi, F. (2003). Food regimes and the production of value: Some methodological issues. *Journal of Peasant Studies*, 30(2), 41–70. <https://doi.org/10.1080/03066150412331311129>
- Beacham, J. (2018). Organising food differently: Towards a more-than-human ethics of care for the anthropocene. *Organization*, 25(4), 533–549. <https://doi.org/10.1177/1350508418777893>
- Belich, J. (2007, September 26). Globalisation and the nation. [Key Note Address]. Concepts of the Nation Symposium, Wellington, New Zealand. <https://nzhistory.govt.nz/files/documents/JamesBelich-GlobalizationandNation.pdf>
- Binney, J., Bassett, J., Galloway, T., & Olssen, E. (1990). *The people and the land te tangata me te whenua: An illustrated history of New Zealand, 1820-1920*. Allen & Unwin.
- Brooking, T., & Pawson, E. (2007). Silences of grass: Retrieving the role of pasture plants in the development of New Zealand and the British Empire. *Journal of Imperial & Commonwealth History*, 35(3), 417–435. <https://doi.org/10.1080/03086530701523406>
- Burgess, A. C. (1951). An introduction to Taranaki. *Proceedings of the New Zealand Grassland Association*, 33–45. <https://doi.org/10.33584/jnzg.1951.13.971>
- Busch, L. (2007). Performing the economy, performing science: From neoclassical to supply chain models in the agrifood sector. *Economy and Society*, 36(3), 437–466. <https://doi.org/10.1080/03085140701428399>
- Cameron, J., & Wright, S. (2014). Researching diverse food initiatives: From backyard and community gardens to international markets. *Local Environment*, 19(1), 1–9. <https://doi.org/10.1080/13549839.2013.835096>
- Campbell, H. (2020). *Farming inside invisible worlds: Modernist agriculture and its consequences*. Bloomsbury Academic.
- Carlisle, L. (2015). Audits and agrarianism: The moral economy of an alternative food network. *Elementa: Science of the Anthropocene*. <https://doi.org/10.12952/journal.elementa.000066>
- Chappell, P. R. (2014). *The climate and weather of Taranaki*. NIWA. <https://docs.niwa.co.nz/library/public/NIWAsts64.pdf>

- Crang, M., & Cook, I. (2007). *Doing ethnographies*. SAGE.
- Cresswell, T. (2009). Place. In A. Kobayashi (Ed.), *International Encyclopedia of Human Geography* (Vol. 8, pp. 169–177). <https://doi.org/10.1016/B978-008044910-4.00310-2>
- Crop Swap. (n.d.). Crop Swap Aotearoa/New Zealand. Retrieved 26 January 2022, from <https://www.cropswapnz.co.nz>
- Dahlberg, K. (1993). Regenerative food systems: Broadening the scope and agenda of sustainability. In P. Allen (Ed.), *Food for the future* (pp. 75–102). New York: Wiley.
- DeLind, L. B. (2011). Are local food and the local food movement taking us where we want to go? Or are we hitching our wagons to the wrong stars? *Agriculture and Human Values: Journal of the Agriculture, Food, and Human Values Society*, 28(2), 273. <https://doi.org/10.1007/s10460-010-9263-0>
- Dubois, A. (2018). Nurturing proximities in an emerging food landscape. *Journal of Rural Studies*, 57, 1–12. ScienceDirect.
- Duell, R. (2013). Is 'local food' sustainable? Localism, social justice, equity and sustainable food futures. *New Zealand Sociology*.
- DuPuis, E. M., & Goodman, D. (2005). Should we go "home" to eat? Toward a reflexive politics of localism. *Journal of Rural Studies*, 21(3), 359–371. <https://doi.org/10.1016/j.jrurstud.2005.05.011>
- EAT NZ. (2021, December 29). *Taranaki*. <https://www.eatnewzealand.nz>
- Egli, V., Oliver, M., & Tautolo, E.-S. (2016). The development of a model of community garden benefits to wellbeing. *Preventive Medicine Reports*, 3, 348–352. <https://doi.org/10.1016/j.pmedr.2016.04.005>
- Exporting butter to Britain*. (n.d.). [Poster]. Ministry for Culture and Heritage. Retrieved 7 March 2022, from <https://nzhistory.govt.nz/media/photo/exporting-butter-britain>
- FAO. (2020). *The state of food security and nutrition in the world 2020: Transforming food systems for affordable healthy diets*. Food and Agriculture Organization. <https://doi.org/10.4060/ca9692en>
- Fladvad, B. (2019). Diverse citizenship? Food sovereignty and the power of acting otherwise. *Social Sciences*, 8(12), 1–16. <https://doi.org/10.3390/socsci8120331>
- Fold, N., & Pritchard, B. (2005). *Cross-Continental Agro-Food Chains*. Routledge.
- Fonterra. (n.d.). *Embracing Sustainability*. Retrieved 1 March 2022, from <https://www.fonterra.com/nz/en/embracing-sustainability.html>
- Fonterra credit ratings underpinned by monopoly. (n.d.). *NZ Herald*. Retrieved 7 March 2022, from <https://www.nzherald.co.nz/business/fonterra-credit-ratings-underpinned-by-monopoly/LWJFMBAUY3PS4WPQY5YXBX4U44/>
- Freeman, C. (2018, April 12). *Urban Farming in Taranaki an introduction to Freeman Farms* [Video]. YouTube. <https://www.youtube.com/watch?v=DXgpNN8iDul>
- Friedmann, H. (1993). The political economy of food: A global crisis. *New Left Review*, 1/197, 29–57.

- Friedmann, H. (2005). From colonialism to green capitalism: Social movements and emergence of food regimes. In F. H. Buttel & P. McMichael (Eds.), *New Directions in the Sociology of Global Development* (Vol. 11, pp. 227–264). [https://doi.org/10.1016/S1057-1922\(05\)11009-9](https://doi.org/10.1016/S1057-1922(05)11009-9)
- Gecas, V. (2001). Resocialization. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social & behavioral sciences*. Elsevier. <https://www.sciencedirect.com/topics/social-sciences/resocialization>
- Gereffi, G., & Korzeniewicz, M. (1994). *Commodity chains and global capitalism*. Greenwood Press.
- Gibson-Graham, J. K. (2008). Diverse economies: Performative practices for 'other worlds'. *Progress in Human Geography*, 32(5), 613–632. <https://doi.org/10.1177/0309132508090821>
- Giraud, E. (2021). Urban food autonomy: The flourishing of an ethics of care for sustainability. *Humanities*, 10(48), 48–48. <https://doi.org/10.3390/h10010048>
- Glover, T. D., Parry, D. C., & Shinew, K. J. (2005). Building relationships, accessing resources: Mobilizing social capital in community garden contexts. *Journal of Leisure Research*, 37(4), 450–474. <https://doi.org/10.1080/00222216.2005.11950062>
- Godfray, C., Crute, I., Haddad, L., Lawrence, D., Muir, J. F., Nisbett, N., Pretty, J., Robinson, S., Toulmin, C., & Whiteley, R. (2010). Introduction: The future of the global food system. *Philosophical Transactions: Biological Sciences*, 365(1554), 2769–2777.
- Goodman, D., DuPuis, E. M., & Goodman, M. K. (2012). *Alternative food networks: Knowledge, practice, and politics*. Routledge.
- Goodman, D., & Watts, M. (1997). *Globalising food: Agrarian questions and global restructuring*. Routledge.
- Granwal, L. (2022, February). *Dairy industry in New Zealand*. Statista. <https://www.statista.com/topics/6069/dairy-industry-in-new-zealand/>
- Grelet, G., & Lang, S. (2021). *Regenerative agriculture in Aotearoa New Zealand: Research pathways to build science-based evidence and national narratives*. Our Land and Water National Science Challenge.
- Guthman, J. (2008). "If they only knew": Color blindness and universalism in California alternative food institutions. *Professional Geographer*, 60(3), 387–397. <https://doi.org/10.1080/00330120802013679>
- Hales, S. (2003, August 1). *Social deprivation and the public health risks of community drinking water supplies in New Zealand*. *Journal of Epidemiology & Community Health*. <https://jech.bmj.com/lookup/doi/10.1136/jech.57.8.581>
- Hall, S., Held, D., & McGrew, T. (1992). *Modernity and its futures*.
- Hargreaves, R. (1963). Pioneer farming in Taranaki 1841-1850. *New Zealand Geographer*, 19(1), 46–59. <https://doi.org/10.1111/j.1745-7939.1963.tb00083.x>
- Harvey, D. (2005). *A brief history of neoliberalism*. Oxford University Press.
- Hay, I., & Cope, M. (2016). *Qualitative research methods in human geography*. (4th edition). Oxford University Press.

- Heynen, N., Kurtz, H. E., & Trauger, A. (2012). Food Justice, hunger and the city. *Geography Compass*, 6(5), 304–311. <https://doi.org/10.1111/j.1749-8198.2012.00486.x>
- Hitchings, R., & Latham, A. (2020). Qualitative methods II: On the presentation of 'geographical ethnography'. *Progress in Human Geography*, 44(5), 972–980. <https://doi.org/10.1177/0309132519879986>
- Hoare, L. (2019). *Agroecological market gardening in Australia* [Unpublished master's thesis]. University of Melbourne.
- Hopma, J., & Woods, M. (2014). Political Geographies of 'Food Security' and 'Food Sovereignty'. *Geography Compass*, 8(11), 773–784. <https://doi.org/10.1111/gec3.12163>
- Howarth, T., & Rhodes, A. (2017). *Taranaki on a plate: The stories of food and food production in the region like no other*. Venture Taranaki Trust.
- Jackson, G., McNamara, K. E., & Witt, B. (2020). System of hunger: Understanding causal disaster vulnerability of indigenous food systems. *Journal of Rural Studies*, 73, 163–175. <https://doi.org/10.1016/j.jrurstud.2019.10.042>
- Jackson, P., Ward, N., & Russell, P. (2009). Moral economies of food and geographies of responsibility. *Transactions of the Institute of British Geographers*, 34(1), 12–24.
- James, D., Bowness, E., Robin, T., McIntyre, A., Dring, C., Desmarais, A., & Wittman, H. (2021). Dismantling and rebuilding the food system after COVID-19: Ten principles for redistribution and regeneration. *Journal of Agriculture, Food Systems, and Community Development*, 10(2), 29–51. <https://doi.org/10.5304/jafscd.2021.102.019>
- James, S. (2016). Beyond 'local' food: How supermarkets and consumer choice affect the economic viability of small-scale family farms in Sydney, Australia. *Area*, 48, 103–110.
- Jarosz, L. (2014). Comparing food security and food sovereignty discourses. *Dialogues in Human Geography*, 4(2), 168–181. <https://doi.org/10.1177/2043820614537161>
- Johnston, K. (2021, December 16). *Building communities of care for food systems change* [Webinar]. Sydney Environmental Institute, Sydney, Australia. https://soundcloud.com/sei_sydney/building-communities-of-care-for-food-systems-change
- Johnston, W. B. (1950). The development of communication lines across the Taranaki uplands. *New Zealand Geographer*, 6(2), 171–189. <https://doi.org/10.1111/j.1745-7939.1950.tb01719.x>
- La Trobe, H. L., & Acott, T. G. (2000). Localising the global food system. *International Journal of Sustainable Development and World Ecology*, 7(4), 309–320. <https://doi.org/10.1080/13504500009470050>
- Lambert, R. (2015). Story: Taranaki region. In *Te Ara: Encyclopedia of New Zealand*. <https://teara.govt.nz/en/taranaki-region>
- Land allocation and confiscation in the Taranaki region. Map with ms annotations.* (1927). [Map]. <https://natlib.govt.nz/records/22301289>
- Le Heron, R., Penny, G., Paine, M., Sheath, G., Pedersen, J., & Botha, N. (2001). Global supply chains and networking: A critical perspective on learning

- challenges in the New Zealand dairy and sheepmeat commodity chains. *Journal of Economic Geography*, 1(4), 439–456. <https://doi.org/10.1093/jeg/1.4.439>
- Lyson, T. A. (2004). *Civic agriculture: Reconnecting farm, food, and community*. Tufts University Press.
- MacKain, S. (2010). The art of geographic interpretation. In D. DeLyser, S. Herbert, S. Aitken, M. Crang & L. McDowell (Eds.), *The SAGE Handbook of Qualitative Geography* (pp. 359–372). SAGE Publications, Inc. <https://doi.org/10.4135/9780857021090>
- Magnan, A. (2012). Food regimes. In J. M. Pilcher (Ed.), *The Oxford handbook of food history* (Vol. 1). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199729937.013.0021>
- Mansvelt, J., & Berg, L. D. (2016). Small stories, big impact: Communicating qualitative research to wider audiences. In M. Cope & I. Hay (Eds.), *Qualitative research methods in human geography* (5th ed., pp. 373–393). Oxford University Press.
- Matthews, J. (2020, August 21). *Soil Workshop* [Workshop]. Farming to Flourish, Kaitake Farm, Taranaki.
- McAloon, J. (2008). Story: Land ownership. In *Te Ara: Encyclopedia of New Zealand*. <https://teara.govt.nz/en/land-ownership>
- McMichael, P. (2009). A food regime genealogy. *Journal of Peasant Studies*, 36(1), 139–169. <https://doi.org/10.1080/03066150902820354>
- McMichael, P. (2012). The land grab and corporate food regime restructuring. *Journal of Peasant Studies*, 39(3–4), 681–701. <https://doi.org/10.1080/03066150.2012.661369>
- McMichael, P. (2016). Commentary: Food regime for thought. *The Journal of Peasant Studies*, 43(3), 648–670. <https://doi.org/10.1080/03066150.2016.1143816>
- Meat Industry Association of New Zealand. (2020, 2021). *Red meat trade sector summary*. <https://www.mia.co.nz/assets/Uploads/Overall-Factsheet-2021-Final.pdf>
- Millar, S. (2020, April 29). *Introducing our regenerative future*. Pure Advantage. <https://pureadvantage.org/introducing-a-new-campaign-on-regenerative-agriculture-in-nz/>
- Ministry for Primary Industries. (n.d.). *Regenerative farming practices projects*. <https://www.mpi.govt.nz/funding-rural-support/sustainable-food-fibre-futures/regenerative-farming-practices-project/>
- Ministry of Business, Innovation & Employment. (n.d.). *Just Transition*. <https://www.mbie.govt.nz/business-and-employment/economic-development/just-transition/>
- Ministry of Business, Innovation and Employment. (2020). *Regional factsheet: Taranaki*. <https://www.mbie.govt.nz/dmsdocument/11453-regional-factsheet-taranaki-pdf>
- Ministry of Health NZ. (2021). *Annual update of key results 2020/21: New Zealand health survey*. <https://www.health.govt.nz/publication/annual-update-key-results-2020-21-new-zealand-health-survey>

- Morgan, K. (2015). The moral economy of food. *Geoforum*, 65, 294–296. <https://doi.org/10.1016/j.geoforum.2015.07.029>
- Morin, K. M., & Berg, L. D. (2001). Gendering resistance: British colonial narratives of wartime New Zealand. *Journal of Historical Geography*, 27(2), 196–222. <https://doi.org/10.1006/jhge.2000.0299>
- Naseemullah, A. A. (2020). Moral economies. In A. Kobayashi (Ed.), *International Encyclopedia of Human Geography* (2nd ed., pp. 187–191). Elsevier. <https://doi.org/10.1016/B978-0-08-102295-5.10842-X>
- Nestle, M. (2018, June 12). Biggest global food companies according to Forbes. *Food Politics by Marion Nestle*. <https://www.foodpolitics.com/2018/06/biggest-global-food-companies-according-to-forbes/>
- New Plymouth District Council. (n.d.). *District statistics*. Retrieved 21 January 2022, from <https://www.npdc.govt.nz/council/about-the-council/who-we-are/district-statistics/>
- New Zealand Immigration. (2021). *Discover the Taranaki region*. <https://www.newzealandnow.govt.nz/choose-new-zealand/regions-cities/taranaki>
- Newton, P., Civita, N., Frankel-Goldwater, L., Bartel, K., & Johns, C. (2020). What is regenerative agriculture? A review of scholar and practitioner definitions based on processes and outcomes. *Frontiers in Sustainable Food Systems*, 4. <https://doi.org/10.3389/fsufs.2020.577723>
- Ngarewa, A. (2022, January 17). The naming of Taranaki Mounga. *The Spinoff*. <https://thespinoff.co.nz/atea/17-01-2022/the-naming-of-taranaki-mounga>
- Ouma, S. (2015). *Assembling export markets: The making and unmaking of global food connections in West Africa*. John Wiley & Sons Inc.
- Parnell, W., Reid, J., Wilson, N. C., McKenzie, J., & Russell, D. (2001). Food security: Is New Zealand a land of plenty? *New Zealand Medical Journal*, 114(1128), 141–145.
- Patel, R. (2009). Food sovereignty. *Journal of Peasant Studies*, 36(3), 663–706. <https://doi.org/10.1080/03066150903143079>
- Patel, R. (2021). The power of agroecology: Farmers worldwide are growing and sharing food in ways that enhance nutrition, biodiversity and quality of life. *Scientific American*, 325(5), 34–45.
- Pavlovich, K., Henderson, A., & Barling, D. (2021). Organizing for thoughtful food: A meshwork approach. *Agriculture and Human Values*, 38(1), 145–155. <https://doi.org/10.1007/s10460-020-10139-0>
- Pritchard, B. (2009). Food regimes. In R. Kitchin & N. Thrift (Eds.), *International Encyclopedia of Human Geography* (pp. 221–225). Elsevier. <https://doi.org/10.1016/B978-008044910-4.00165-6>
- Renting, H., Schermer, M., & Rossi, A. (2012). Building food democracy: Exploring civic food networks and newly emerging forms of food citizenship. *International Journal of Sociology of Agriculture & Food*, 19(3), 289–307.
- Reynolds, D., Miroso, M., & Campbell, H. (2020). Food and vulnerability in Aotearoa New Zealand: A review and theoretical reframing of food

- insecurity, income and neoliberalism. *New Zealand Sociology*, 35(1), 123–152.
- Roche, M. (2012). Food regimes revisited: A New Zealand perspective. *Urbani Izziv*, 23, S62–S75.
- Rodale Institute. (n.d.). *Regenerative Organic Agriculture*. Retrieved 18 January 2022, from <https://rodaleinstitute.org/why-organic/organic-basics/regenerative-organic-agriculture/>
- Rodale Institute. (n.d.). *Organic Basics*. <https://rodaleinstitute.org/why-organic/organic-basics/>
- Schreefel, L., Schulte, R. P. O., de Boer, I. J. M., Schrijver, A. P., & van Zanten, H. H. E. (2020). Regenerative agriculture: The soil is the base. *Global Food Security*, 26.
- Scott, C. (2018). Sustainably sourced junk food? Big Food and the challenge of sustainable diets. *Global Environmental Politics*, 18(2), 93–113. https://doi.org/10.1162/glep_a_00458
- Shadbolt, N., & Apparao, D. (2016). Factors Influencing the dairy trade from New Zealand. *International Food and Agribusiness Management Review*, 19(B), 241–255.
- Shaw, H. J. (2006). Food deserts: Towards the development of a classification. *Geografiska Annaler: Series B, Human Geography*, 88(2), 231–247. <https://doi.org/10.1111/j.0435-3684.2006.00217.x>
- Slocum, R. (2007). Whiteness, space and alternative food practice. *Geoforum*, 38(3), 520–533. <https://doi.org/10.1016/j.geoforum.2006.10.006>
- Soloviev, E., & Landau, G. (2016). *Levels of regenerative agriculture*. <https://ethansoloviev.com/wp-content/uploads/2019/02/Levels-of-Regenerative-Agriculture.pdf>
- Statistics NZ. (n.d.). *Population*. Statistics NZ. Retrieved 22 January 2022, from <https://secure.livechatinc.com/>
- Statistics NZ. (2018). *Place Summaries: New Zealand*. <https://www.stats.govt.nz/tools/2018-census-place-summaries/new-zealand>
- Stratford, & Bradshaw. (2016). Qualitative research design and rigour. In I. Hay & Cope, Meghan (Eds.), *Qualitative research methods in human geography*. (4th edition). Oxford University Press.
- Stringleman, H., & Scrimmegeour, F. (2008). Story: Dairying and dairy products. In *Te Ara: Encyclopedia of New Zealand*. <https://teara.govt.nz/en/dairying-and-dairy-products>
- Stuckler, D., & Nestle, M. (2012). Big Food, food systems, and global health. *PLOS Medicine*, 9(6). <https://doi.org/10.1371/journal.pmed.1001242>
- Taranaki Regional Council. (n.d.). *The Taranaki region*. Retrieved 21 January 2022, from <https://www.trc.govt.nz/council/council-and-region/the-taranaki-region/>
- Terra Genesis International. (n.d.). *Cultivating transformation*. Retrieved 10 January 2022, from <https://terra-genesis.com/>

- Tofa, M. (2014). Incomplete reconciliations: A history of settling grievances in Taranaki, New Zealand. *Journal of Historical Geography*, 46, 26–35. <https://doi.org/10.1016/j.jhg.2014.05.027>
- Trauger, A. (2014). Toward a political geography of food sovereignty: Transforming territory, exchange and power in the liberal sovereign state. *Journal of Peasant Studies*, 41(6), 1131–1152. <https://doi.org/10.1080/03066150.2014.937339>
- Tregear, A. (2011). Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of Rural Studies*, 27(4), 419–430. <https://doi.org/10.1016/j.jrurstud.2011.06.003>
- Tronto, J. C. (2015). *Moral boundaries: A political argument for an ethic of care*. Routledge.
- Tsing, A. (2009). Supply chains and the human condition. *Rethinking Marxism*, 21(2), 148–176. <https://doi.org/10.1080/08935690902743088>
- United Nations. (n.d.). *Global Issues*. Retrieved 25 January 2022, from <https://www.un.org/en/global-issues>
- United Nations. (n.d.). *Sustainable Development Goal 2: Zero Hunger*. Retrieved 6 March 2022, from <https://www.un.org/sustainabledevelopment/hunger/>
- Veen, E. J., & Dagevos, M. (2019). Diversifying economic practices in meal sharing and community gardening. *Urban Agriculture & Regional Food Systems*, 4(1). <https://doi.org/10.2134/urbanag2017.10.0005>
- Venture Taranaki. (n.d.). *Energy*. Retrieved 26 January 2022, from <https://www.venture.org.nz/sector-development/energy/>
- Warre, H. J. (n.d.). *Wiremu Kīngi Te Rangitāke's pā* [Watercolour]. Ministry for Culture and Heritage Te Manatu Taonga. Retrieved 7 March 2022, from <https://teara.govt.nz/en/artwork/783/wiremu-kingi-te-rangitakes-pa>
- Watson, A., & Till, K. (2010). Ethnography and participant observation. In D. DeLyser (Ed.), *The Sage handbook of qualitative geography*. (pp. 121–137). SAGE.
- Watts, D., Ilbery, B., & Maye, D. (2005). Making reconnections in agro-food geography: Alternative systems of food provision. *Progress in Human Geography*, 29(1), 22–40. <https://doi.org/10.1191/0309132505ph526oa>.
- Whatmore, S., Stassart, P., & Renting, H. (2003). What's alternative about Alternative Food Networks? *Environment and Planning A*, 35(3), 389–391.
- Willis, R. P. (1984). Farming in New Zealand and the E.E.C.: The case of the dairy industry. *New Zealand Geographer*, 40(1), 2–11. <https://doi.org/10.1111/j.1745-7939.1984.tb01476.x>
- Winder, G. M. (2009). Grassland revolutions in New Zealand: Disaggregating a national story. *New Zealand Geographer*, 65(3), 187–200. <https://doi.org/10.1111/j.1745-7939.2009.01162.x>
- Yong, R., Browne, M., Zhao, D. J., Lun, D. A. C., Shackleton, D. N., & Crengle, D. S. (2017). *A deprivation and demographic profile of the Taranaki DHB* (p. 10). University of Auckland: Medical and Health Sciences. https://www.fmhs.auckland.ac.nz/assets/fmhs/soph/epi/hgd/docs/dhb_profiles/Taranaki.pdf

Zandt, F. (2021). *The world's smallest farms feed more people than you might think, research shows*. World Economic Forum.
<https://www.weforum.org/agenda/2021/10/fuel-food-work-world-farms-agriculture/>

APPENDIX 1: RESEARCH INTERACTIONS

TITLE	TYPE	DATE	STAKEHOLDER	RECORDED	IMAGES	FIELD NOTES
OMG visit	Site Visit	5 Jun 2020	Sarah Smuts-Kennedy	Audio	Yes	Yes
Mtg w/ Meike	Meeting	8 Jun 2020	Meike Rotteveel	No	No	Yes
Mtg w/Carl	Meeting	8 Jun 2020	Carl Freeman	Audio	No	Yes
Mtg w/ Venture Taranaki and Bashford Nicholls Trust	Meeting	9 Jun 2020	Eve Kawana-Brown, Simon Cayley	Audio	No	Yes
Peihana Farm Visit	Site Visit	9 Jun 2020	Maria Lempriere	Audio	Yes	Yes
Kaitaki Farm	Site Visit	9 Jun 2020	Toby Dixon	Audio	Yes	Yes
Workshop 1 Soil Workshop	Event	9 Jul 2020	Jules Mathews, Fiona Young, Eve Kawana Brown	No	Yes	Yes
Peihana Farm Visit	Site Visit	30 Jul 2020	Maria Lempriere	No	Yes	Yes
Food Producer Networking	Event	1 Dec 2020	Regional producers	No	No	No
Urban backyard garden/urban food forest	Site Visit	2 Dec 2020	Mary Sagen	Audio	Yes	Yes
Thula Greens	Site Visit	2 Dec 2020	Cecily	Audio	Yes	Yes
Waitara Community	Site Visit	2 Dec 2020	Pounamu Skelton	Audio	Yes	Yes
Freeman Farms - Airport Rd site	Site Visit	2 Dec 2020	Carl Freeman	No	Yes	Yes
Food Resilience	Event	3 Dec 2020	Those engaged in food in Taranaki	No	Yes	No
Peihana Farm Visit	i/view	28 Jan 2021	Maria Lempriere	Audio	Yes	Yes
Beach Rd Milk Kiosk	Observe	29 Jan 2021	Ryan & Megan	Video	Yes	Yes
Crop Swap - Waitoriki & Inglewood	Event	30 Jan 2021		Video	Yes	Yes
Garden Visit - Lepperton	Site Visit	30 Jan 2021	Shonagh Hopkirk	No	Yes	Yes
Taranaki Farmers Market	Active Research	31 Jan 2021	Taranaki Farmers Market	Video	Yes	Yes
Marfell Community Garden	Site Visit	31 Jan 2021	Urs Singer	No	Yes	Yes
Parihaka Māra Kai	Site Visit	1 Feb 2021	Urs Singer	Audio	Yes	Yes
Family garden	Site Visit	1 Feb 2021	Simeon Theobald	Audio	Yes	Yes

Spotswood Garden	Site Visit	1 Feb 2021	Pounamu Skelton	No	Yes	No
Goldbush Microgreens	Site Visit	2 Feb 2021	Michelle & Jarrod Busby	Video	Yes	Yes
Peihana Farm Visit	Site Visit	3 Feb 2021	Maria Lempriere	No	Yes	Yes
Workshop 2 Produce to Market	Event	March 2021		Video	Yes	Yes
Workshop 3 Long Lunch	Event	1 May 2021	Taranaki growers & producers	Video	Yes	Yes
Mārae Visit	Site Visit	29 Jul 2021	Glen Skipper	Audio	No	Yes
PIVOT research feedback	Meeting	31 Jul 2021	Maria, Rosanna, Tobias, Terry	Audio	Yes	Yes
PIVOT research feedback	Zoom meeting	Aug 2021	Taryn, Carl, Urs, Michelle	Video	No	Yes