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Building a Place-based Social Licence to Operate

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Executive summary

Farming's social licence to operate (SLO) is not lost in Aotearoa New Zealand. Our survey with a representative sample of New Zealanders shows that people from diverse backgrounds value the benefits the farming sector brings to the country. Our research also shows, however, that recognising the sector's benefits does not equate to greater trust in farming. Across rural and urban respondents, there are feelings of low trust in the sector, and a sense of disconnect on both sides between farmers and the broader public. In the past, the value farming brings to the country may have been enough to maintain support, but mistrust is growing across society, and there is a perception that the sector is not being open and transparent about its impact on the environment or the treatment of animals. The farming sector now has to counter distrust in aspects of its practice. Building and maintaining SLO—the ongoing acceptance of the industry's practices—cannot just be about the industry 'telling their story'; SLO must be place-based, rooted in trust, and built on genuine dialogue with empowered communities.

Our research, undertaken in 2022-2023, sought to understand what shapes New Zealanders' perceptions of farming, and what the key points of divergence and connection are that can offer new ideas for connecting farmers and diverse publics to strengthen SLO. We conducted a survey with a sample of 1,384 New Zealanders, ensuring representation across genders, ages, and ethnicities throughout the country, and we then conducted follow-up interviews with key stakeholders and partners. We framed our questions about views of the farming sector in terms of trust and responsibility, in line with research on SLO that emphasises the importance of building trust between communities and producers.

People from diverse backgrounds value the farming sector's role in feeding people, producing food, caring for the natural environment, providing employment and the ethical welfare of animals. Common concerns about farming related to environmental impact, costs, animal welfare, misinformation and government interference. However, perceptions of farming do differ across rural/urban identity groups and levels of trust have some variation based on migration status and relative to specific farming industries. We also found fewer divisions amongst rural and urban people and greater antagonism oriented towards institutions and organisations. Although some responses revealed tensions over whether it is farmers' responsibility to build SLO and the need for greater innovation in environmentally sustainable practices, there was a common desire for greater education about what is occurring in the farming sector and to go beyond us/them divisions. Moving forward, we might use these points of connection, mechanisms for genuine communication and different forms of interaction to foster SLO.

Social License encompasses a perception of whether or not expectations of responsibilities are being met. A common perception amongst farmers and non-farmers is that supermarkets are not fulfilling perceived responsibilities to consumers or to farmers. Supermarkets could be a valuable site for building SLO through quality communication about the products produced by the farming sector. More than half of urban respondents claimed that information gained while visiting supermarkets shapes their perception of farming. However, the lack of a direct connection between farmers and purchasers makes it difficult for farmers to rely on supermarkets to facilitate these connections. Survey respondents also felt that the government is not fulfilling perceived responsibilities to farming, and there was recognition that fulfilling responsibilities to Māori is a challenging space and not sufficiently addressed.

Levels of trust in the sector varied across types of industry, with dairy lower than sheep & beef and horticulture. Those who lack trust in the farming sector emphasise that implementing and highlighting sustainable practices and avoiding communication that seems like PR spin can build trust. Clear communication and transparency are strongly related to people's level of trust. But communication, as a contributor to trust, can also be problematic. Farmers are concerned that news media mis-represents the sector by focusing on negative stories or sensational headlines. Survey respondents also worried that the sector is too engaged in PR spin. Given that we also found the news media to be the major influence on peoples' perceptions of farming, this insight emphasises the need to identify spaces for transparent and genuine interaction and communication.

In-person and direct relationships between farmers and publics is considered, by many, to be the most effective mechanism for building trust. Our research affirmed that it is important for interactions to go beyond surface encounters and one-way communication, to focus on people's common humanity in order to build trust. Farmers' markets, A&P shows and Field Days were popular amongst respondents across sectors in our survey. Open farm days are shown to be a valuable space for dialogue and trust building, but appeal to a limited demographic and are difficult to scale outwards. While hesitations about virtual forums for dialogue are prevalent, these show promise as spaces of engagement and dialogue. We are now using the insights generated through this research as a base to build tools that enable reciprocal dialogue between farmers and the broader public.

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Introduction

Social License to Operate (SLO) is increasingly used in primary industries, such as farming, as a benchmark for communities' approval of the sector. Emerging research in Aotearoa New Zealand (NZ) identifies trust as a core component of SLO (Edwards & Trafford, 2016; Edwards et al., 2019). The COVID-19 pandemic heightened awareness of the importance of public trust in, and reliance on, domestic agriculture, food and fibre industries because of interruptions to international supply chains. Yet, who are those ‘communities’ that need to provide approval in a NZ context, what is the status of social licence in NZ and how do the concerns and values of different groups shape the future of SLO for the farming sector? If we are to think differently about our collective and intergenerational responsibilities towards te Taiao and take a holistic approach to achieving better environmental outcomes by increasing and sharing value - while supporting the value the farming sector brings to NZ - we need to build on convergent perspectives among diverse communities, iwi partners and stakeholders. Developing trust is not a one-size-fits-all.

Therefore, our approach seeks to understand what shapes New Zealanders’ perceptions of farming, and what are the points of connection that can offer new ideas for connecting farmers and diverse publics to build trust. SLO should be understood as comprising plural ‘social licences’ that reflect alignment with diverse values as well as community engagement and management of social impacts (Moffat et al., 2016; Sinner et al., 2020). The idea of a ‘urban-rural divide’ regarding attitudes towards farming is prominent in the New Zealand media, but market research company UMR (2017) suggests that this divide is much more complex, and people across rural and urban sectors share agreements as well as divergent views on farming. More research is needed to understand what shapes people’s perceptions of farming across a wide range of publics.

NZ farmers and rural industry leaders recognise that consumer preferences and perceptions of farming will be one of the key drivers of change in the future (Driver et al., 2019). Gaining SLO cannot just be about the industry ‘telling their story’ or providing data on sustainability, but also “engaging with empowered communities, letting them initiate and drive the dialogue, rather than coming top-down from industry” (Edwards & Trafford, 2016, p. 174). Therefore, this think-piece aims to learn from initiatives that have fostered SLO between farmers and non-farming publics, assess the current state of SLO in NZ relative to the farming sector, and pilot strategies for facilitating dialogue amongst stakeholders and partners, farmers and non-farmers, consumers and producers. We find that the most profound experiences of dialogue are those that go beyond surface narratives toward a deeper understanding of the systemic pressures on farmers that shape production decisions, and that enable people to be aware of the assumptions they have about food production and consumption and to question those assumptions.

A Social License to Operate and Farming in Aotearoa NZ

The emergence of SLO and early critiques

Initially coined by the mining industry in 1997, the term 'Social Licence to Operate' (SLO) was used to gauge local community acceptance of mining operations (Bice et al., 2017). Since then, it has been extended to various industries, such as aquaculture (Alexander, 2022), biotech (Delborne et al., 2020), forestry (Ford & Williams, 2016), and oil and gas (Richert et al., 2015). Industries and corporations seek consumer support because they want consumer influence and buy-in on their product (Johansen & Nielsen, 2011). Consumers are empowered. SLO signifies an informal agreement between industry and community stakeholders that permits industry operations and primarily reflects social expectations of corporate entities, NGOs, and government (Dumbrell et al., 2020; Jijelava & Vanclay, 2014).

However, critics of SLO caution against its use as a public relations strategy rather than indicating meaningful engagement with stakeholders (Hamann & Kapelus, 2004; Martin & Shepheard, 2011; Owen & Kemp, 2013). Amongst extractive industries, in particular, SLO has served as a tool for masking conflicts with local communities and to silence dissent rather than genuinely shifting power dynamics (Parsons et al., 2014). Even the very definition of 'stakeholder' in SLO raises questions: who qualifies as a stakeholder (see for example: Black, 2017; Cleland, 2013; Joyce & Thomson, 2000; Boutilier & Thomson, 2011)? Certain communities or individuals may be prioritised as the sole stakeholders (Parsons & Moffat, 2014a; 2014b), while others, including Indigenous communities, are often underrepresented (World Bank, 2003a; 2003b). It is crucial to clarify interpretations of SLO and broaden the understanding of terms like 'community' and 'stakeholders' that can prioritise specific groups at the expense of others. The influence of global capitalism has reshaped socioeconomic boundaries, necessitating a broader view of 'community.' Defining key terms and addressing evolving understandings are critical challenges in operationalizing SLO.

Fostering SLO through trust, dialogue and relationship-building

Understanding the factors that help build trust, as a fundamental dimension of SLO, between communities and industries is vital. Mistrust between the public and industries is on the rise (Prno, 2013; Beaulieu, 2018; Hampton & Teh-White, 2019; Overduin & Moore, 2017; Braun et al., 2020). Publics increasingly expect industries involved in natural resource development or use to account for the environmental, social, and cultural impacts of their operation (Cullen-Knox et al., 2017; Moffat et al., 2016). Farming is one of these industries, with rising global concern over its role in degrading the environment (Rovers et al., 2017; Meyer et al., 2012; Batt, 2010).

In NZ, for example, a growing segment of the population no longer finds environmental exploitation justifiable under the notion of "feeding the world" and is challenging the farming sector to enhance environmental performance while maintaining economic efficiency and competitiveness in the global marketplace (UMR, 2017). Specifically, urban communities' favourable perceptions of dairy farming have declined alongside the expanding scale and intensity of dairy production which has resulted in considerable environmental impacts and criticism over animal welfare and environmental degradation (UMR, 2017; Davies-Colley & Nagels, 2002; Parkyn et al., 2002; Parliamentary Commissioner for the Environment, 2012, 2013, 2015; Baxter-Smith & Simpson, 2020). As a result, there is more pressure on farmers to address these concerns in order to retain public approval for their operation, i.e. a SLO (Baxter-Smith & Simpson, 2020).

Developing and maintaining relationships and engaging in genuine and reciprocal dialogue, help build trust and minimise misunderstandings that can undermine SLO (Jijelava & Vanclay, 2017; Parsons et al., 2014; Boutilier & Thomson, 2011; Moffat & Zhang, 2014). "Trust is cemented in social relationships; founded on ways people experience their relationships with each other and the institutions or organisations they interact with" (Edwards et al., 2019, p.3). Without trust, social conflict can escalate, leading to industry shutdowns. Maintaining trust among industry, government, and communities is essential for SLO (Jijelava & Vanclay, 2017). It is argued that industries must prioritise long-term trust-building strategies rather than relying on marketing operations to gain community approval for SLO (Brand et al., 2022; Baumber et al., 2021).

Dialogue strengthens relationships between industry and stakeholders by creating a reciprocal relationship between the stakeholder and industry and is a way of providing a sense of shared identity (Prno, 2013; Hurst et al., 2020; Alexander, 2022). The act of dialogue, Mercer-Mapstone et al. (2017) argue, is a process of co-creating or learning something new, which could not be achieved individually and can change perspectives by disrupting existing ideas and experiences. For dialogue to be effective, it must be reciprocal, involving genuine listening and respect for all manner of stakeholders (Monk et al., 2011). Even brief interactions between farmers and stakeholders, if characterised by a genuine desire to learn and understand, can raise awareness and promote collaboration in addressing shared problems (Faysse et al., 2014). Farmers commonly attribute public opposition to farming practices to a perceived lack of public knowledge (Yeung & Morris, 2001; Beaulieu, 2018). This perspective assumes a unidirectional flow of information, with experts imparting knowledge to the public (Eden, 2011). However, public opinion is shaped by factors beyond industry knowledge (Vanhonacker et al., 2008) and objections often arise from conflicting values associated with specific practices (Hansen et al., 2003).

Dialogue must also be culturally relevant. In cases of historical injustice and conflict, like the NZ context, building trust requires long-term reciprocal dialogue that acknowledges past grievances and nurtures relationships (Ehrnström-Fuentes & Kröger, 2017). This is particularly challenging in the NZ context where economic benefit is prioritised over the health of the environment and the concerns of iwi are ignored (Memon & Kirk, 2012). Dialogue should be ongoing, because stakeholders, industry and partners' commitments can shift throughout a project's lifespan (Eden et al., 2008; Jokinen et al., 2012; Costanigro et al., 2014). Alongside the danger of SLO becoming a mere PR initiative, misleading claims about things such as sustainability can damage social licence if perceived as greenwashing (Vanclay, 2017). So, dialogue needs to be genuine.

Farming and Non-Farming communities in Aotearoa

New Zealand researchers use SLO to understand evolving perceptions of primary industries (Newton et al., 2020; Allen et al., 2019). However, there is limited research on how SLO is operationalized in the New Zealand context. Ruckstuhl et al. (2014) discuss securing SLO in the Aotearoa mining sector. They highlight the importance of Māori partnership in natural resource decisions outlined in Te Tiriti o Waitangi. They argue that companies often view Māori as stakeholders instead of partners in the SLO model and highlight the exceptional diversity and complexity of seeking SLO in Aotearoa (Ruckstuhl et al., 2014). In Aotearoa, farming is intertwined with cultural stories and national histories. Māori brought agricultural knowledge and developed horticulture methods suited to the climate and landscape (Barber & Higham, 2021; Clarke et al., 2006; Roskruge, 2011). European settlers also established farms in the 19th century, turning farming into an export-based industry (Brooking, 2021; Fleming, 1982; Woods, 2015; Dombroski et al., 2020). Today, the farming landscape is complex, ranging from owner-operated family farms and orchards, large family enterprises, corporate entities, Māori Incorporations, operating with a range of values and approaches that align with a diversity of identities, cultural bottom lines and approaches to production (e.g. regenerative agriculture, organics, low-input & high input).

As a geographically isolated country, farming is a foundational component of NZ's economy (Fountaine, 2020; Payne et al., 2019; Dombroski et al., 2020; Kelly & Smith, 2012). It is also symbolically tied to notions of heritage and national identity, often referred to as 'real' New Zealand (Bell, 1997). In discussions of SLO, farmers emphasise the unique and culturally significant history of the industry in NZ. Edwards and Trafford (2016, p. 176) recount a statement made by the President of Federated Farmers New Zealand at the time: "Rolleston describes it as an anathema that farming should even need to consider a social licence, given New Zealand's farming heritage." Together, both Edwards and Trafford (2016), and Ruckstuhl, Thompson-Fawcett and Rae (2014), draw attention to distinct cultural histories within NZ that complicate SLO.

NZ is also undergoing demographic changes, with increased urbanisation and fewer direct connections to farming. Despite the significant economic contribution of farming, according to Morris (2014, p. 190) the "high moral value traditionally associated with productivist farming is no longer taken for granted, and the pioneer backbone-of-the-nation discursive strategy [has become] less efficacious than it once was." Farmers employ stewardship discourses and position themselves as environmentalists, but then face criticism if they fail to live up to these ideals (Morris, 2014). Market research company UMR has conducted surveys that shed light on the increasing divergence of public perceptions of farming in Aotearoa between urban and rural areas. The tensions, specifically concerning dairy farming, are frequently framed in terms of a rural-urban dichotomy, which is often reinforced through sensationalised media narratives (UMR, 2017). There are, however, a number of initiatives that have attempted to bridge this so-called divide and engage farmers and non-farming publics in dialogues that aim to foster public support for farming.

Exploring Farmer-Public Engagement in Aotearoa

There is a broad literature highlighting initiatives that aim to connect farmers and non-farming publics, including Community-Supported Agriculture (CSA) and farmers' markets. While NZ farmers' markets are important, the produce exchanged through these initiatives represents only a fraction of NZ's overall food production. Most of the country's food production is oriented towards exporting commodities, primarily in the dairy, sheep and beef, and horticulture sectors. Furthermore, the production of long-chain commodities inherently lacks individual identity and interchangeability. Growers and farmers operating at this level are assimilated with other food producers, making it difficult to differentiate themselves. This challenge is particularly pronounced for large-scale farms. Additionally, many interactions and interdependencies between farmers and non-farming publics are centred on consumption-related activities (La Trobe, 2001; Kline et al., 2016; Bray, 2019; Kotilla & Rönni, 2008). Local production stories, such as those experienced at farmers' markets, are more likely to engender a heightened level of trust and uphold SLO. However, as the supply chain grows more complex, the production stories tend to fade into obscurity, thereby making it increasingly difficult to establish a link between farmers and consumers. This is particularly challenging for mainstream or large-scale farming and highly processed commodities that struggle to maintain their unique production stories.

Community Supported Agriculture

Community Supported Agriculture (CSA) allows consumers to actively participate in and support local agriculture by subscribing to a local farm and making advance payments for a portion of its produce (see for example: Hinrichs, 2000; Obach & Tobin, 2014; Schermer, 2015; Papaoikonomou & Ginieis, 2017). Consumers develop a vested interest in the farm's success and it provides farmers with a predictable market for their harvest. CSA participation also offers opportunities for farm visits, volunteer work, and insight into the farming process. A study in Austria found that trust-building activities between members and publics are important (Gugerell et al., 2021). These programmes can bridge the producer-consumer gap, promote face-to-face interaction and encourage non-farmers to engage in food production (Carolan, 2007).

Farmers Markets

Farmers' markets are another direct-to-consumer platform for fresh, locally-grown produce (La Trobe, 2001; Feagan & Morris, 2009). These markets contribute to the reconstruction and sustenance of local and regional food systems (Hinrichs, 2000; Doernberg et al., 2016; Balázs et al., 2016; Nikolaido et al., 2020); diversify economic outcomes; enhance access to fresh food; and promote sustainable agricultural practices (Smithers et al.,, 2008; Kremen et al., 2012). Farmers' markets facilitate interactive engagement, allowing farmers and consumers to build relationships (Guthrie et al., 2006; Lawson et al., 2008; Chalmers et al., 2009; Joseph et al., 2013). NZ has its own farmers' markets in urban and suburban areas, enabling easy access to locally-grown produce (MacKay &

Connelly, 2019; Asmarani, 2022; Nichols, 2021; Craig, 2020; Atkinson, 2021) and they do foster relationships and support local food systems (Adams & Adams, 2011).

While direct and local relationships play a vital role in distinguishing farmers' markets from other markets, as emphasised by Turner and Hope (2014), less is known about the extension of virtual farmers' markets. Virtual markets have gained traction after the COVID-19 pandemic. They provide farmers with novel opportunities to access consumers via diverse communication channels, including online and mobile technologies (Raison & Jones, 2020; Balkrishna et al., 2021). The literature consistently highlights transparency as crucial in fostering positive relationships between farmers and non-farming communities. While some of these efforts are moving into the digital realm, it remains uncertain whether online spaces can facilitate the same degree of transparency possible through in-person interactions (Schütz et al.,, 2022).

Educational Initiatives

Limited literature focuses on community-based agricultural education programs, yet it demonstrates the global utilisation of farms and farming practices as educational resources (Harris, 2009; Mattu, 2016; Mattu & Wood, 2017). These initiatives, including farm visits, workshops, and events highlighting the food-environment link, raise awareness about the labour involved in food production. In NZ, similar programs are implemented through school gardens and marae visits (Carolan, 2007; Collins et al., 2015; Hutchings et al., 2020; Hanna & Wallace, 2022), fostering connections between farming and non-farming publics (Barbieri et al., 2016; Harris, 2009). Case studies of land stewardship programs showcase activities like tree planting, species removal, and wetland restoration, promoting shared responsibility between farming and non-farming publics (Regan & Kenny, 2022; Vetter, 2022). In NZ, Integrated Catchment Management, exemplified by the TAIERI Trust, brings together a diverse mix of community members, including farmers, non-farmers, Māori, university staff, and coordinators, to facilitate environmental work (Tyson et al., 2005).

Agricultural Tourism

Recent research in North America, Netherlands, Ireland and NZ indicate a growing interest in locally-sourced food and sustainable agriculture, with consumers increasingly curious about the origin and production of their food (Alonso, 2010; Barbieri et al. 2006; Chase et al., 2021; Halpenny & Yan, 2021; Kline et al., 2016; Mackay et al., 2019; Middlekamp, 2020; Morais et al., 2017; Murray et al., 2021; Yan, 2019). This has led to the rise of agritourism, where visitors travel to farms, vineyards, and ranches to learn about agricultural practices, participate in activities, and connect with local farmers. A prominent theme in the literature on agritourism is the demand for experiential travel and 'authentic' experiences. By engaging in activities such as harvesting crops, feeding animals, and processing food products, such as cheese or wine, tourists can experience rural life (Yan & Halpenny, 2019). Agritourism in the Netherlands has been found to enhance relationships between farmers and the public, enabling two-way conversations (Middelkamp, 2020). Moreover, visitors can ask questions and provide feedback, allowing farmers to better understand their customers' needs and preferences. Furthermore, researchers suggest that agritourism has the potential to diversify rural economies by providing additional sources of income to specialty farms (Kline et al., 2016; Chase et al., 2021; Brune et al., 2021).

Agricultural Shows

Regional Agricultural and Pastoral (A&P) shows are a central conduit of interaction between rural and non-rural communities in NZ (Brown et al., 2019). Much of the research about A&P shows circulates the theme of place-making. Here the formation of place-based identities in rural areas is examined. Crucially, as farmers showcase their produce and livestock to the public, these events elevate awareness of regional distinctions across agricultural practices. Furthermore, A&P shows have been found to enhance the comprehension of farmers' challenges in producing food and other agricultural commodities while demonstrating the multifaceted role of agriculture in society and its ecological and economic implications (Brown et al., 2019). According to Fountain and Mckay (2017) these events serve as a unique connection point between farmers and the non-farming public in Aotearoa. Research has also identified various agricultural conventions that foster connections between farming and non-farming communities (Holloway, 2004; 2005). These types of events offer farmers opportunities for networking, exchanging information, and discussing industry trends, while also serving as important social and networking platforms, especially in rural areas (Thomas 2018; Holloway 2004; 2005; Scott & Laurie, 2010). They also play a crucial role in conserving and promoting rare and heritage animal breeds, which contribute to the genetic diversity of livestock populations (Yarwood & Evans, 2006). Furthermore, these events facilitate connections between farmers and related agribusinesses.

Farming and Media

Media has become a mechanism for farmers and industries to directly connect with consumers and engage in dialogue. A narrow literature examines the influence of media on farming communities, distinguishing between media that farmers can regulate (Riley & Robertson, 2021) and media over which they possess limited control (Fountaine, 2020). The focus is primarily on traditional media channels, with limited attention given to digital media, such as virtual farm tours (Wrigley et al., 2017; Nolden, 2018; Stohlmann, 2019; Schütz et al., 2022). In Aotearoa, some scholars argue that farmers enjoy a certain level of support that is rooted in productivism, identity politics, and the rural idyll (Fountaine, 2020; Forney & Stock, 2014; Rosin, 2013; Bell, 1997). This support is often magnified through various media channels and outreach initiatives, with the television program Country Calendar considered to serve as a clear example of such media (Craig, 2020; Fountaine, 2020; 2022; Fountaine & Bulmer, 2022). The rural idyll perspective idealises rural areas and work, portraying them as more picturesque, friendly, and with better neighbours (Forney & Stock, 2014). This viewpoint is argued to aid farmers and the agriculture sector in maintaining social licence as they represent a better and more authentic side of humanity, exemplifying honest hard work. Although the rural idyll may hold some truth in certain aspects, it is also utilised as a powerful marketing and brand management tool (Fountaine, 2020).

Social Media

Social media has emerged as a prominent platform for farmers to showcase their work, especially those practising non-conventional methods such as organic or heritage farming. The significance of social media in consumer-producer interactions cannot be overstated, according to some scholars, as it increasingly facilitates connections between farmers and publics (Buddle, 2022; Braun et al., 2020; Drejerska et al., 2019). Social media has brought about a transformative shift in how consumers engage with producers and brands, replacing the traditional one-way communication model with active and participatory interactions (Walsh et al., 2013; Muntinga, 2016; Malthouse et al., 2013).

In a study conducted by Pilař et al. (2018), customers' experiences at farmers' markets were examined by analysing their self-expression on social networks, with a specific focus on the hashtag #farmersmarket on Instagram. The analysis revealed the prevalence of hashtags such as #Organic, #Fresh, #Local, #Vegan, and #Healthy, indicating a growing interest in valuing regionality and authenticity in food production. Organic farmers and those involved in heritage breed farming benefited from using these hashtags to connect with their target audiences (Pilař et al., 2018). The rise of various social media platforms has empowered farmers to share agricultural knowledge and showcase the importance of farming to non-farmers. However, the reach of social media is limited due to the formation of filter bubbles, both by platforms and users (Buddle, 2019).

Social media can also be used as a platform for conflict between interest groups. In Australia, conflicts between farmers and animal activists occasionally escalate from social media platforms to mainstream media and government policy (Williams et al., 2022). Social media serves as a cost-effective and impactful tool for activists to shape public opinion on meat consumption, covering a range of issues from animal welfare advocacy to promoting the cessation of animal-derived products (Buddle, 2019). Public perception of farming practices is heavily influenced by concerns about animal welfare and environmental sustainability. In the future, industry's ability to communicate responsible innovation and practices around environmental sustainability, in response to climate change and animal welfare, will determine their ability to access markets and cultivate a competitive advantage (Lees & Lees, 2018). Recent developments in Australia and New Zealand have brought increased attention to issues such as caged egg production, bobby calves, and live animal exports (Hampton et al., 2020; Tulloch & Judge, 2018). However, attempts to restrict negative publicity by controlling the flow of information, such as through "ag-gag" laws, which prohibit taking photos and videos on farms without permission, can have unintended consequences: undermining public trust in animal welfare and farmers (Bolton, 2019; Robbins et al., 2016; Gauly et al., 2017).

With its immediacy and interactivity, social media has revolutionised stakeholder communication and empowered different stakeholder groups. However, it is important to recognize the diverse implications for SLO. While social media enables the rapid spread of misinformation globally, it also plays a role in disseminating false information about farming practices and food production to the non-farming public, leading to confusion and distrust (Buddle et al., 2018; Williams et al., 2022). Social media can both facilitate and disrupt connections between farmers and the non-farming public in multiple ways.

Research Methods

Scholarship on divergent worldviews and creating spaces for dialogue on contentious issues suggests that words can have different meanings at their root. It is difficult to speak to an issue when these underlying divergent worldviews are not explored. Thus, in this study we take up a novel methodology developed by rural sociologist Michael Carolan (2018) of the generation of word clouds through survey analysis, to open new conversations amongst New Zealanders from various backgrounds. This methodology seeks to understand the underlying assumptions that inform people's perceptions of farming, and to identify points of connection between diverse publics. Following the survey, we used semistructured interviews and post-it free response activities to delve deeper into key findings from the survey analysis.

Survey questions were informed by social licence and farming literature and co-created with input from social and agricultural scientists, including Māori scientists. The survey started with demographic and behavioural questions that we hypothesised, based on prior literature, may shape perceptions of the sector. Participants then provided word associations and responded to open-ended prompts. Word association responses were coded and consolidated into a word cloud based on frequency. Network mapping analysis was used to draw out the different understandings and points of connection. To assess the potential sense of (dis)connection between farming and non-farming publics, we asked a series of likert-scale questions about respondents' perceptions of understanding and connections between the farming sector and the broader NZ public, and their experience with initiatives that connect farmers and the public. Likert scale questions also assessed views on roles and responsibilities of farming sectors, government, supermarkets, Māori, and the public. To assess the industry's social licence as perceived by the respondent, we asked a series of questions where trust is the underlying mechanism for achieving social licence.

Our study targeted the broad public in Aotearoa NZ, as all those who live in Aotearoa NZ are stakeholders of New Zealand farming. This provides a wider scope than targeting only those directly involved with industry, as is common practice in SLO studies (Sinner et al., 2020). We did not include international stakeholders (such as overseas consumers or regulators) as our interest was in understanding the perceptions of those who live in NZ and who are thus subject to both the benefits and the potential ecological, social and economic costs of farming practices.

The survey was piloted with a diverse group in November 2022 and, following subsequent feedback and online testing, opened from 10-31 December 2022. To achieve a representative sample of the Aotearoa NZ population, we sought at least 1350 responses, with soft targets of an age and gender split approximating to the most recent census; at least 17% Māori (proportional to population); and at least 30% rural (while NZ rural population is approx 14% we oversampled for rural to gain diverse voices of farmers and other rural people). We used multiple recruitment strategies to limit the selection bias inherent in a single technique. One strategy involved a paid advertisement on multiple social media sites, including Facebook, LinkedIn, Instagram and Reddit, which Gilligan et al. (2014) found more cost effective than a postal survey and reached a similar demographic. We also sent the link to networks of people that may be interested, including farming and environmental groups. Compensation was not automatic, but respondents could enter a draw for a $50 voucher.

We received 1,514 responses, with 1,384 deemed valid. We met all targets for gender, age, ethnicity, and rural/urban split (see Results section).

Follow-up interviews added depth to the survey responses. We interviewed six interested survey respondents and key stakeholders from various contexts. Questions explored survey insights and people's experiences with, and ideas for, connecting farmers and non-farming publics. Interviews were conducted via zoom or in-person, and some were video recorded with consent. In addition, seven interviews were conducted at A&P shows (Palmerston, Maniototo and North Otago), with show attendees who expressed interest in the project. Ethics consent was obtained from Massey University Human Ethics Committee (number: 4000025783).

Data analysis involved descriptive analysis, logistic regressions in R, and thematic analysis on NVIVO.

Results and discussion

Who we surveyed

Demographically, our survey is broadly representative of the Aotearoa NZ population in gender, age and ethnicity (See Table 1).

Table 1. Demographic Characteristics of Survey Respondents

Demographic Characteristics	Sample Size	%
Age		
- 18-25yrs	289	21.0%
- 26-42 yrs	386	28.0%
- 43-59 yrs	331	24.0%
- 60-75 yrs	316	22.9%
- 75 yrs +	55	4.0%
Gender		

- Male	697	51%
- Female	665	49%
- Other	15	.01%
Rural/urban identification		
- Urban	385	54.7%
- Rural	745	28.3%
- Combination rural/urban	229	16.8%
- Other	28	0.02%
Occupation		
- Farmer/grower (current or former)	486	35%
- Other primary sector-related occupation	366	27%
- Occupation not related to primary sector	525	38%
Ethnicity		
- Māori	269	19.5%
- Asian	118	8.6%
- Pasifika	128	9.3%
- European NZer / Pākehā	735	53.4%
- Other European	70	5.1%
- Other	56	4.1%
History of settlement in Aotearoa NZ		
- Born in NZ, family in NZ 2+ generations	815	61%
- Born in NZ, parents born overseas	121	9.1%
- Born overseas, migrated to NZ as	136	10%

child		
- Born overseas, migrated to NZ as adult	228	17%
- Visiting NZ	32	2.4%
TOTAL	1377	

Occupation varied among respondents, with current and former farmers and horticulturalists (aggregated as 'farmer/grower' in the analysis) comprising 35% of respondents, those working in other primary sector jobs (including the farming service sector, public sector related to farming, NGOs related to farming, or processing, or marketing and logistics related to farming and food) comprising 27%, while those in non-primary sector related jobs comprised 38%.

We also asked participants about their **history of settlement in Aotearoa NZ**, as we hypothesised that those who grew up in NZ might feel more connected to the farming sector or may have higher trust as they may have had more chances for personal encounters. Respondents were heavily weighted towards those whose families have lived in NZ for two or more generations. Rural respondents were more likely to have been born in NZ, while those who moved to NZ as children were much more likely to live in urban areas. Migrants were also younger on average than those born in NZ.

We asked respondents to identify whether they consider themselves **'rural', 'urban', 'a combination of rural and urban'** (what we term 'rural/urban' in the following analysis), or 'other'. Because we are interested in understanding whether there is a divide between rural and urban perceptions of farming, we over-sampled for 'rural' to ensure enough responses to conduct robust analysis. The current proportion of the New Zealand population considered rural[1] is approximately 13%, while the survey respondents self-identified as 28% rural, 55% urban, and 17% rural/urban.

Table 2. Who makes up the rural and urban categories?

	Rural	**Urban**	**Rural/Urban**

[1] StatsNZ (2017) defines rural as comprising both rural settlements and other rural. Rural settlements have a population of about 200-1,000 or at least 40 residences, have some kind of population cluster, and contain at least one community or public building. Other rural includes land used for agriculture and forestry, conservation and parks.

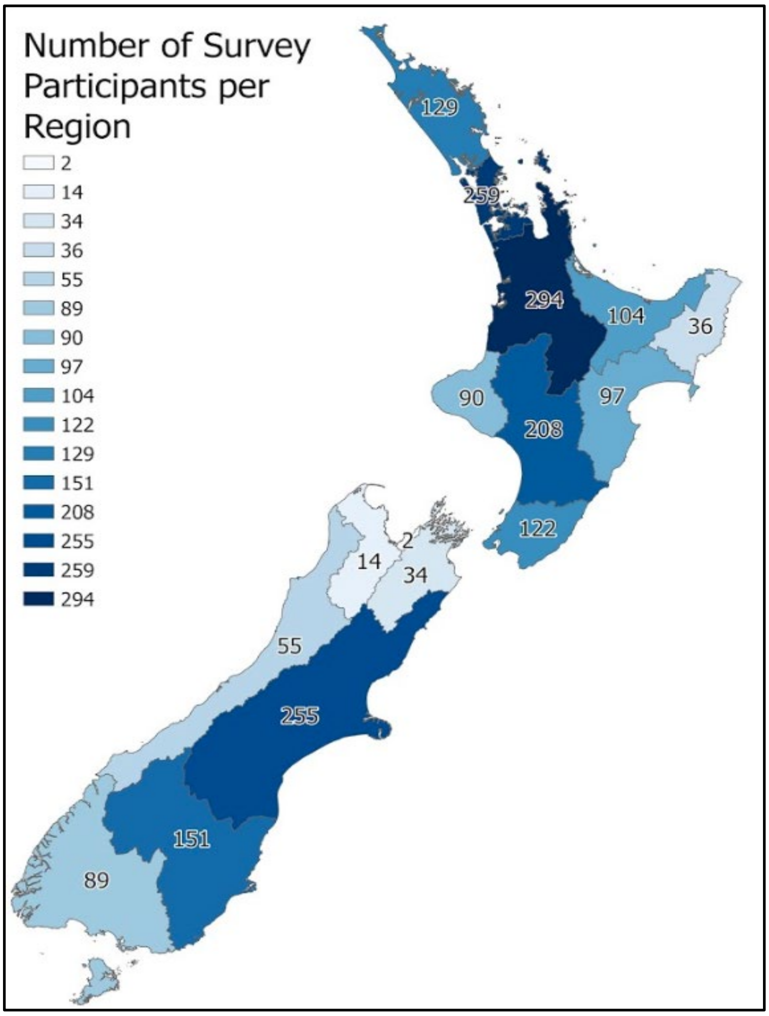
Occupation			
- Farmer/grower (current or former)	69.0%	12.6%	18.2%
- Other primary sector-related occupation	7.1%	77.3%	15.3%
- Occupation not related to primary sector	4.9%	78.4%	16.5%
History of settlement in Aotearoa NZ			
- Born in NZ, family in NZ 2+ generations	52.0%	32.6%	15.3%
- Born in NZ, parents born overseas	39.2%	46.7%	13.3%
- Born overseas, migrated to NZ as child	76.5%	5.2%	18.4%
- Born overseas, migrated to NZ as adult	58.6%	22.0%	18.9%
- Visiting NZ	90.6%	6.3%	3.1%
Gender			
- Female	30.0%	52.8%	16.7%
- Male	26.7%	56.8%	16.5%
- Other	13.3%	53.3%	33.3%
Age			
- 18-25yrs	26.4%	54.0%	19.6%
- 26-42 yrs	28.2%	55.2%	16.1%
- 43-59yrs	30.4%	54.0%	15.5%
- 60-75yrs	29.5%	51.9%	18.2%
- 75yrs +	25.0%	62.5%	12.5%

The high proportion of respondents who identified as rural/urban suggests that a binary understanding of 'rural' versus 'urban' views on farming cannot be substantiated, for a significant number of New Zealanders consider themselves to fall into neither just urban, nor just rural categories. These respondents also tended to be younger (18-25 years old), while rural and urban respondents showed a similar age split. Former farmers were more likely than other occupation groups to say they were 'both' rural and urban. But what does a rural/urban categorisation mean? During interviews, we asked people who self-categorised as rural/urban to explain their choice. For some, it meant that they work in one environment and live in another:

> … I live rural, I work urban. Okay, basically. So my job was as an academic at the University but we have the farm so I did the sheep this morning before I came to work, fed out some hay, checked everyone was okay, I'll get home tonight. I'll do another round of the sheep… So we live in an area that is considered to be rural, in terms of zoning. But we're only twelve minutes' drive to work (Rural/Urban Academic).

For other interviewees, the self-categorisation as rural/urban highlighted not only a geographic sense of place, but also an understanding of or affinity with the rural. Some had come from an urban background, but were now involved with farming, such as one interviewee, a direct-to-market farmer, who noted that she considered herself both rural and urban because: "I'm very, very much rural now. But back then [nineteen years ago], I lived in a small town, moved to another city, and then had a baby and thought 'bugger this' and went south. And went rural."

The geographic breakdown of responses is outlined in this map of Survey Participants per Region. While there was good representation across many of the regions, we had very few respondents from Nelson and Marlborough relative to their population size.



What do Kiwis think of the farming sector?

Social License to Operate (SLO) literature broadly defines social licence in terms of community or public trust in an industry. So, to better understand what social licence might entail for the NZ farming sector, we asked people what they value and are concerned about, their level of trust, mechanisms for facilitating trust, and responsibilities. Ultimately, our goal was to identify points of connection, potential barriers or areas of disagreement, and activities that might form a foundation for achieving SLO.

What are people's perceptions?

What are the first three words that come to mind when you think about the New Zealand farming sector? Our results found that food is a clear point of connection across all of the demographic, occupation, and identity groups we surveyed.

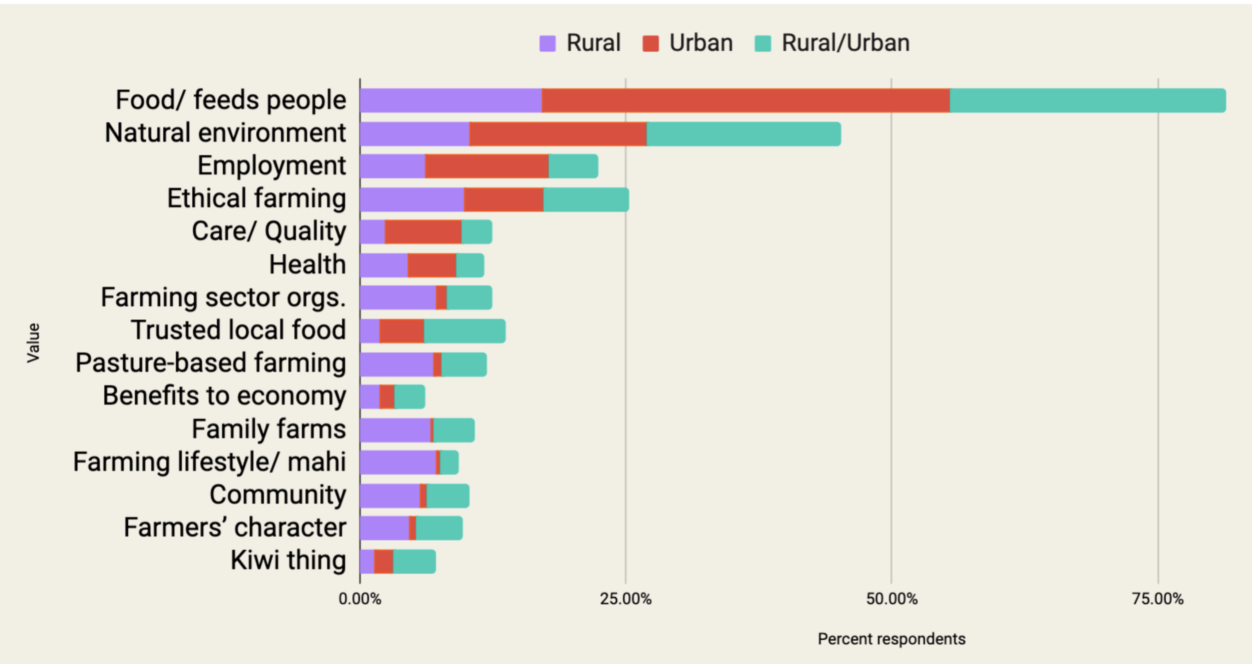
‘Food’ was stated/ written twice as much as any other word when we asked people the first words that come to mind (see Figure 1). Other food-related terms were also top-of-mind for people, including “fresh”, “meat”, and “quality”. The word cloud also reveals terms that are potentially in tension with one another, such as “sustainable” (41 respondents) and “unsustainable” (31 respondents), or positive terms including “green”, “clean”, “essential”, and terms that focus on the negative impacts of production, such as “pollution”. Other common themes include words that relate to the land and farming environment, including “land”, “animals”; words that relate to costs of farming and food, including “cost” and “expensive”; words that relate to farming as a business (“profit”, “exports”, “economy”), and words that relate to rural communities, such as “family”, “local”, “conservative”.

Figure 1. Farming word association word cloud results.

What is valued?

Not only did respondents identify food as strongly linked to farming, but in a subsequent question about what people value about the farming sector, we notice a recognition of the sector's role in feeding people (see Figure 2).

Figure 2. What do you value most about the farming sector in NZ? Results by rural - urban identification

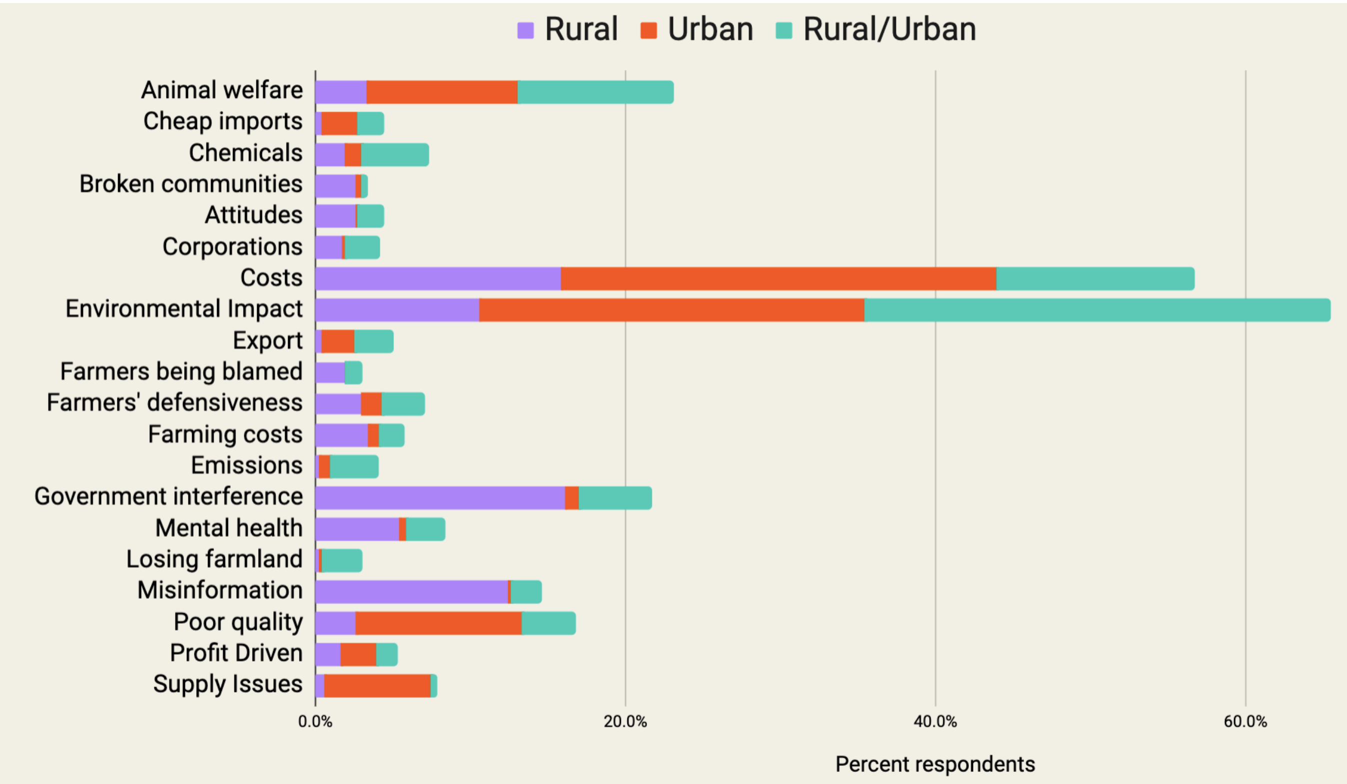


Mention of the environment, employment and ethical farming of animals are also valued across occupation and identity groups. Beyond these points of connection, farmers were more likely to talk about the value of people and rural communities alongside pasture-based production and sector support. Urban and rural/urban respondents reflected on the value of the farming sector and its associated organisations and industries' contributions to food production. People who work in the non-farming primary sector and food sector jobs valued care and quality (where "quality" was most often used in regard to high quality food, as well as the high quality of farming, where "care" most often denoted farmers' care for the land they farm) (see full table of results for occupation and rural-urban identification in Appendix I).

What is of concern?

When asked about their concerns regarding the farming sector, all identity groups focused on two key concerns: **environmental impact** and **costs** (Figure 3; see full table of results for occupation and rural-urban identification in Appendix I).

Figure 3. What concerns you most about the NZ farming sector? Results by rural - urban identification

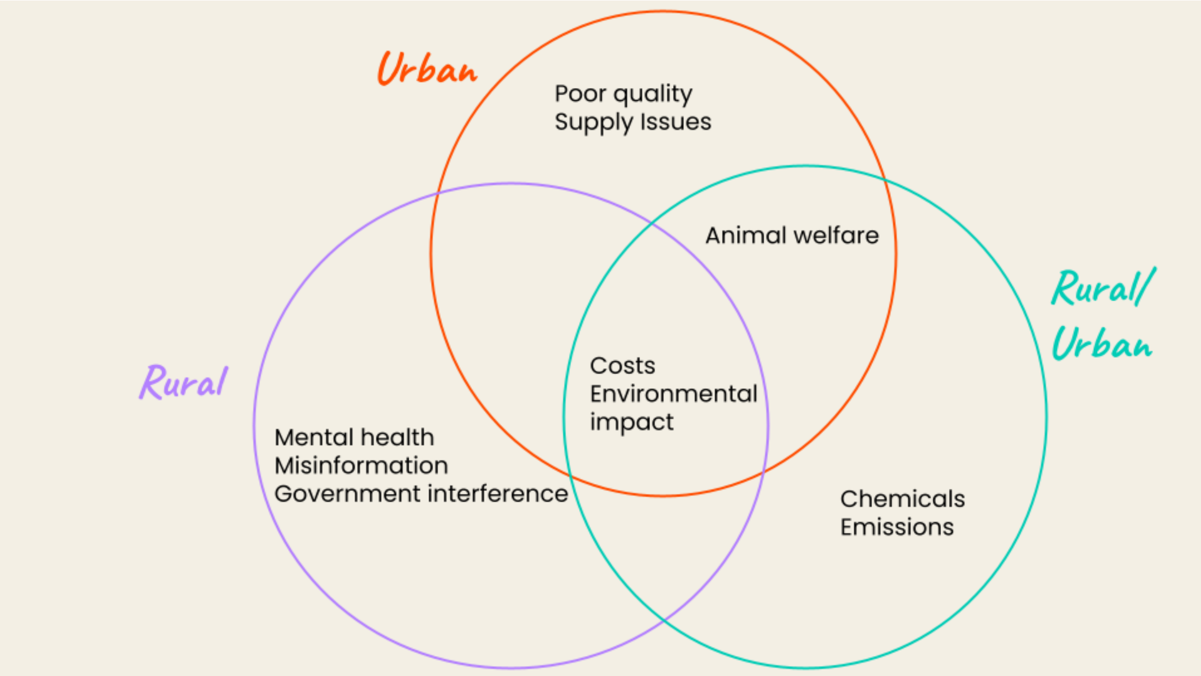


Environmental impact was the most common theme amongst rural/urban respondents, with their answers noting "environmental harms", "degradation", “and footprint” of farming, while it was the second most common response amongst urban respondents, and fourth most common amongst rural respondents. Indeed, environmental concerns feature prominently in case studies of vulnerable or failed SLO (e.g. De Jong & Humphreys, 2016; Dumbrell et al., 2021; Luke, 2017; Demuijnck & Fasterling, 2016). Opposing the notion of productivism, New Zealand authors highlight increasing expectations for the agricultural sector to prioritise environmental and animal welfare (Campbell et al., 2009). Concerns over cost was the most common concern amongst rural and urban respondents. Rural respondents who elaborated on ‘costs’ in their responses most commonly talked about the rising cost of farming, and the costs associated with complying with regulations and farming “the right way”, such as: *“Rising costs of doing things the right way”; “The costs of regulation of the food production system (from resource consents to living accommodation and water supply standards are making it very hard to be a farmer)”; “Rising costs. Farming is under attack in this country”.*

Urban respondents were also concerned about costs. Those who elaborated on ‘costs’ in their responses focused on the cost- of-living rises and increased food prices, as well as how these cost increases made it difficult for them to purchase local, healthy food: *“Cost of living”; “Cost of food”; “When it becomes too expensive to support local”.*

Areas of common concern between urban and rural/urban included animal welfare, as the graphic below summarises. This is not to say that rural people and farmers are not concerned about animal welfare; indeed these groups indicated that they value the ethical treatment of animals equivalently with urban and rural/urban groups. This difference may indicate that farmers and rural people believe that the farming sector treats animals ethically, while urban and rural/urban respondents either feel that more should be done in this space or are not well informed about what is occurring within the sector.

Figure 4. Points of connection and divergence in concerns about the NZ farming sector



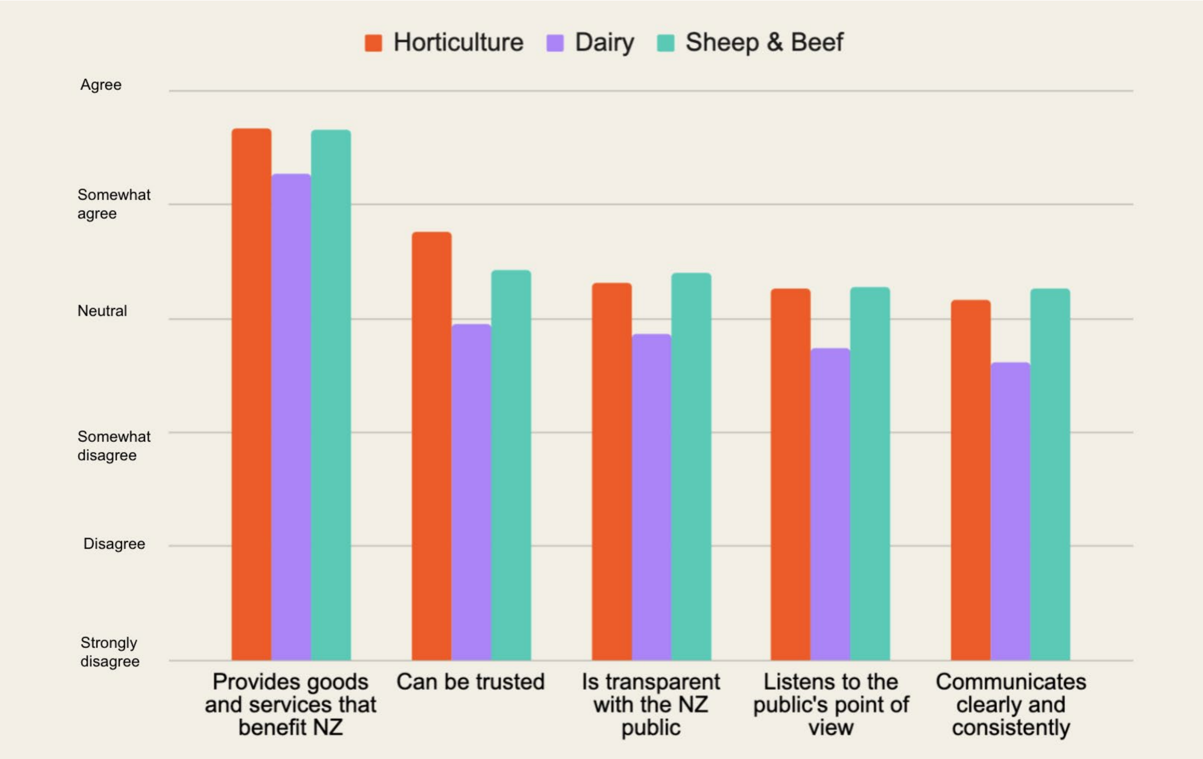
Points of difference are just as important to recognise as points of connection. For example, rural/urban respondents identified a concern with chemicals, likely related to the use of on-farm pesticides and herbicides. Urban people noted a concern with poor quality and supply issues, perhaps connected to criticisms of supermarket produce (which are reiterated in various forms throughout the survey responses) and supply issues - a major concern during and after the height of the COVID-19 pandemic. Finally, we note that rural respondents are particularly concerned with government interference in the farming sector, misinformation and health/mental health. These concerns and how they impact trust, and therefore SLO, are discussed in more detail in the section on 'Enhancing Trusting Relationships'.

Trust

Public trust is essential to the successful operation of industries and trust between industry, government and publics are an essential component for developing and maintaining SLO (Edwards et al., 2019; Jijelava & Vanclay, 2017). Existing literature finds that dialogue, building long-term relationships (Ehrnström-Fuentes & Kröger, 2017), and ensuring an alignment of values (Hansen et al., 2003) are most effective in facilitating trust and SLO. Dialogue, however, cannot simply be a one-way street. Research explains that it must be reciprocal, rooted in a willingness to genuinely listen, culturally appropriate, ongoing and long-term, be authentic - not just marketing and recognise prior injustices (Monk et al., 2011; Fayssee et al., 2014; Ehrnström-Fuentes & Kröger, 2017; Eden et al.,, 2008; Jokinen et al., 2012; Costanigro et al., 2014; Vanclay, 2017). Therefore, our survey asked respondents to rate their levels of trust in horticulture, dairying and sheep & beef sectors and their perceptions of the sectors' communication, transparency, ability to listen to the public, and the benefits they bring NZ.

Our results show, firstly, that overall, farming has not completely lost its SLO with the broader NZ public. The majority of respondents feel that all the main farming sectors provide goods and services that benefit the country (Figure 5). This speaks to an overall public support for these industries.

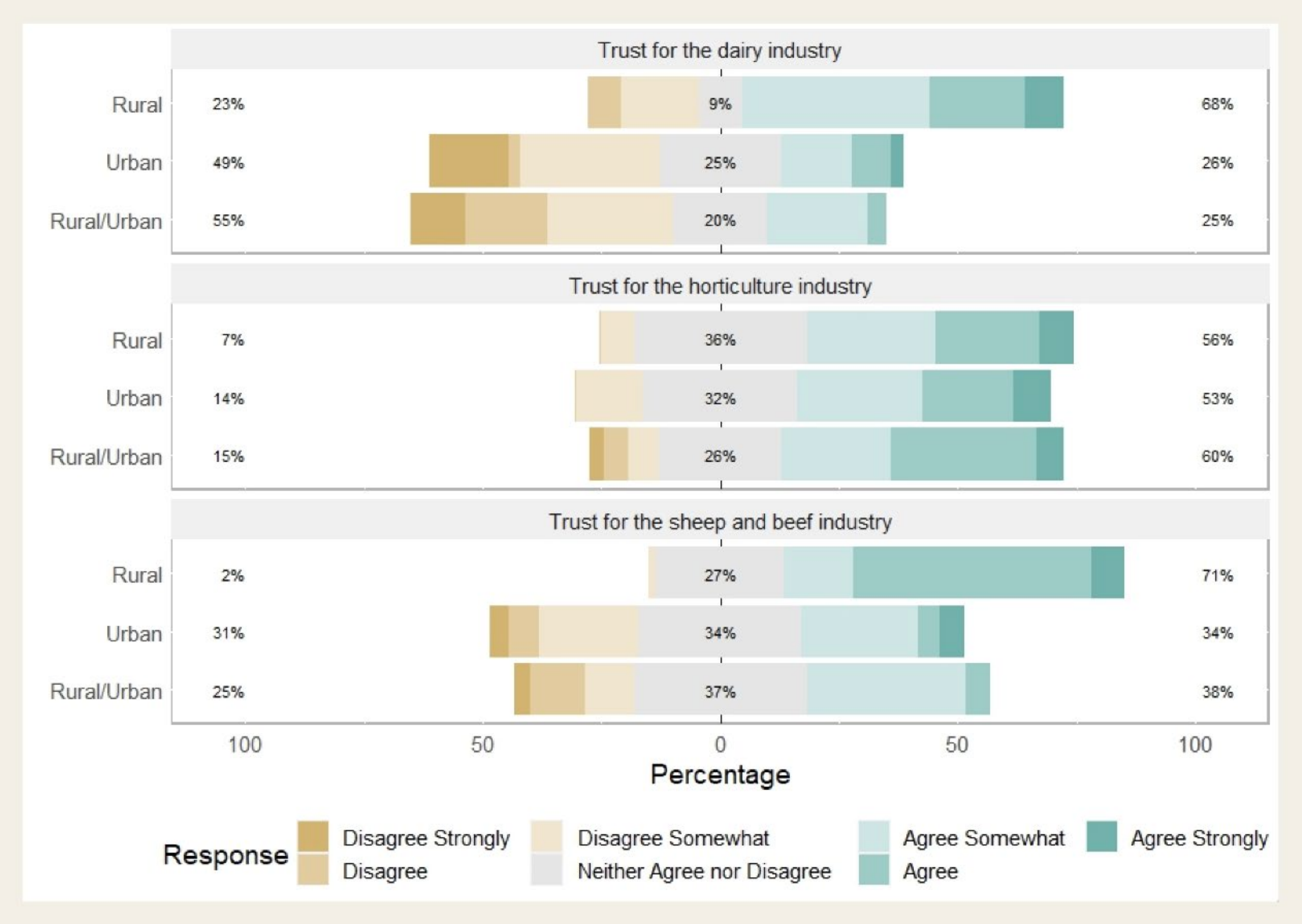
Figure 5. Level of trust in the NZ farming sector



Yet, there are areas for improvement relative to SLO, as seen in the relatively lower scores for trust, transparency, listening to the public and communication.

Levels of trust varied amongst different groups of respondents. We ran an ordinal logistic regression model to more deeply analyse the relationship between people's level of trust in farming and demographic variables (full regression outputs in Appendix I). Two variables showed significant differences across all three farming sectors. First, **rural - urban identification** showed divergence, wherein respondents who identified as urban were significantly less likely to trust the farming sector. When visualised across the range of the likert scale (Figure 6), we see that rural respondents had much higher levels of trust than other respondents for both dairy and sheep and beef sectors, whereas with horticulture, urban people were half as likely to be in a higher trust category when compared with rural people, while there was no significant difference between rural and rural/urban respondents.

Figure 6: Trust in farming sectors by rural/urban identification

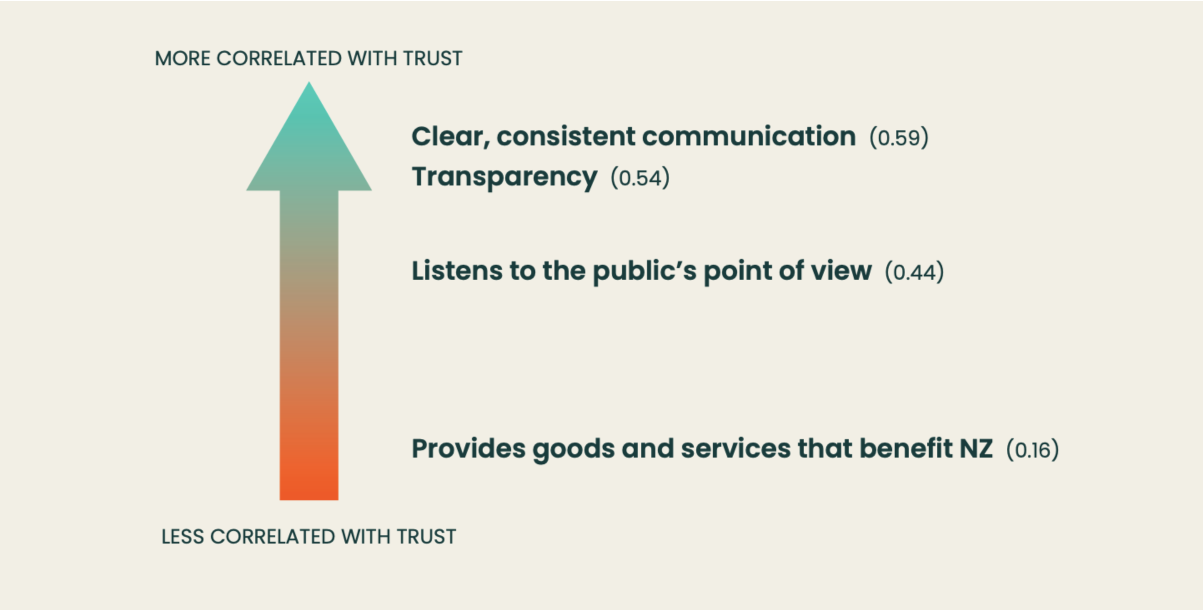


The second variable that showed significant differences in trust levels was people's **history of settlement in Aotearoa NZ**, where respondents who migrated to Aotearoa NZ as adults showed higher trust in all three farming sectors when compared with those who were born in New Zealand. For the dairy sector, the level of trust amongst New Zealanders whose families have been here for two or more generations was also significantly lower than for those born in NZ whose parents were born overseas. While not clear from the survey, this difference in perception may be connected to the international image of Aotearoa NZ farming as a clean, green industry, whereas the criticism of agriculture and its impact on the environment have tended to be a domestic narrative in recent years.

Analysing how perceptions of trust are correlated with other variables shows several interesting trends (Figure 7). Firstly, trust in the three farming sectors is *not* strongly correlated with the perception that the sector provides benefits for the country. (Effectively, there is no correlation between trust and benefit to the country for horticulture (-0.05 correlation) and sheep and beef (0.17 correlation), while there is a weak correlation for dairy (0.35 correlation)). This has implications for social licence. It suggests that a perception of broad benefit to the country does not ensure social licence on its own*, and different ways of building SLO must be considered.*

Figure 7 also shows that **communication** is most highly correlated with trust in all three farming sectors. This suggests an important association for survey participants between how a sector is perceived to communicate, and their level of trust in the sector. Honest, clear, consistent communication by a sector that acknowledges an appreciation of the wider public's point of view was highlighted as contributing to trust in that sector.

Figure 7. SLO variables correlated with trust



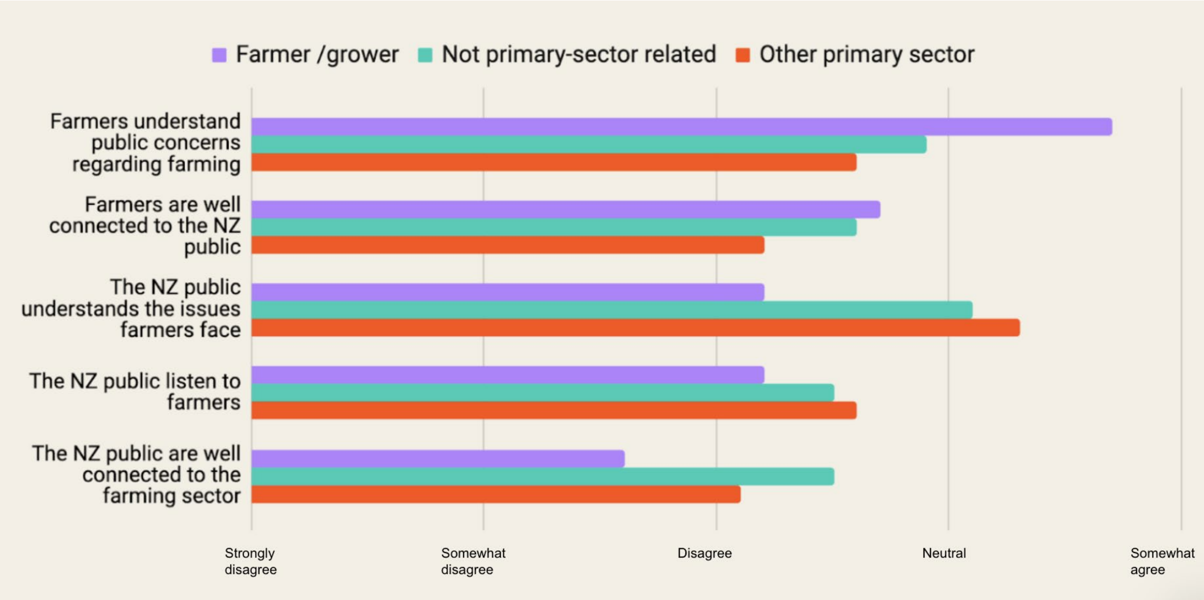
Furthermore, people who trust one farming sector appear likely to trust other farming sectors. Those who trust the dairy sector are strongly correlated with trust in the sheep and beef sector (0.66) and moderately correlated with trust in the horticulture sector (0.42).

Engagement and connection

Public objections to industry actions, and a lack of social licence, often stems from a conflict of values related to a specific practice (Hansen et al., 2003). What is evident in the literature is that sustained relationship-building, a key component of SLO, enables industries, stakeholders and partners to find common ground on shared values and build trust through dialogue and negotiated action: based on those values. Sustained engagement also allows space for better understanding of each other's perspectives and disagreement and healthy debate without undermining relationships. To assess the current status of relationships, we asked respondents about their 'perceptions of connections between farmers and public'.

There is a general perception of disconnection between farmers and the public. While there was no difference in perceptions when the data was aggregated by gender, younger people were slightly more positive in their perception of the connections between farmers and the public than older respondents and Māori were slightly more positive than NZ European. Amongst the identity groups, rural people perceive greater disconnection than urban people, but all identity groups agreed there is some lack of understanding and connection. When we analyse this data by occupation, there is a clear - if slight, on average - difference in views on public connection, farmer's understanding of public concerns and public connections to farming (Figure 8).

Figure 8. Perceptions of connection between farmers and the broader NZ public



Farmers gave particularly low ratings to the statement 'The Aotearoa New Zealand public are well connected to the farming sector' while they gave a very high rating to the statement 'Farmers understand public concerns regarding farming'. As we will discuss later, this survey suggests that there is a pervasive view amongst farmers and rural people that the news media and government are misrepresenting the farming community and perpetuating misunderstanding with the public. That perspective may be underpinning some of these results. Especially as 'non-primary sector related' and 'other' groups were neutral in their opinions of whether the public understand the issues farmers face.

But do these results suggest that there is a strong rural/urban divide? Certainly, our study finds that there are disconnects between the extent to which these groups understand the issues farmers face and farmers and publics are connected. In interviewees, both rural and urban interviewees perceived a lack of understanding and connection, and noted that this is a 'two-way street', where both rural and urban people could do with more understanding:

> I think there's a lack of understanding of what happens on the other side from both sides. But I wonder really, whether the farming sector actually doesn't understand what goes on in urban environments, I think, I think they're not particularly interested in what goes on in urban environments (Environmental Activist).
>
> I don't think it's everybody. But I think certainly in the bigger cities they don't know what happens. But there's also the other side is that a lot of the rural sector see themselves as being more important than what they are. And they also don't know what happens in the city. So it's a two way (Māori Horticulturalist).

While some farmer survey respondents claimed that a divide does exist due to urban misunderstanding of farming challenges, they tended to blame the media for this misunderstanding rather than urban people themselves. Open responses in the survey and interviews reiterate this claim, arguing that the urban-rural divide is a product of media sensationalism and narrow focus on 'headlines', and/or a political tool: a narrative used by politicians depending on the political capital they think is associated with perpetuating the discourse. For example, one interviewee who identified as rural/urban noted:

> … the problem of the politicians is they play it up to suit their needs. So if it suits them to promote a rural-urban divide, then they will promote that for the political ends (Rural/urban Academic).

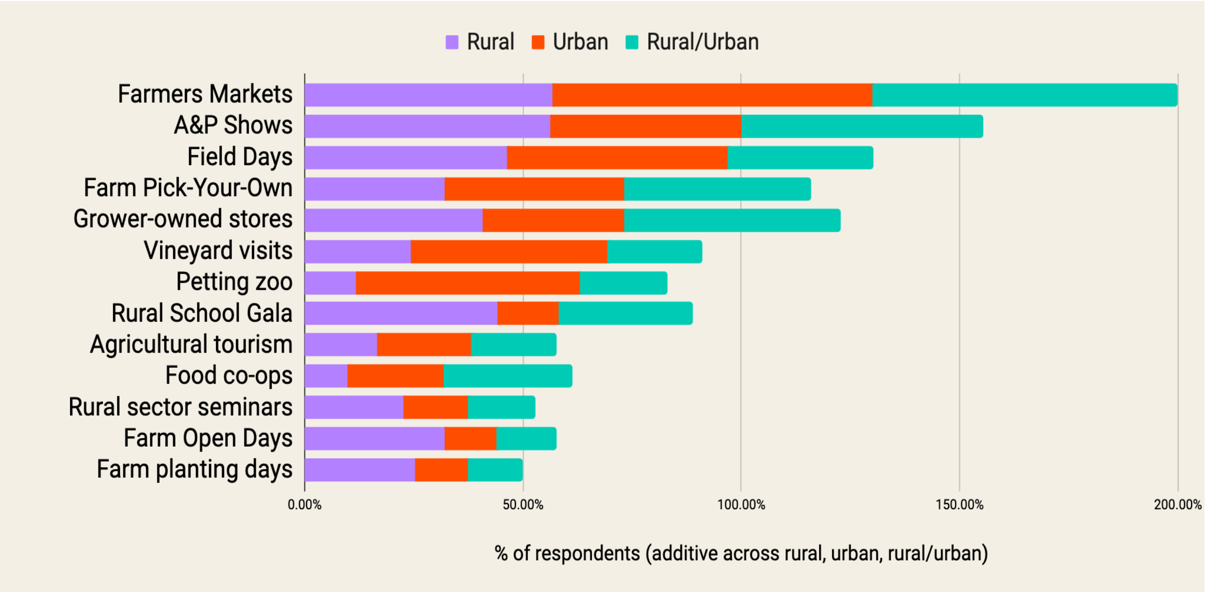
Others felt that the urban-rural divide may exist in large cities but not in provincial New Zealand:

I don't strongly see it [rural urban divide] in provincial New Zealand… there are multiple mix and mingle and connection opportunities be it through school or sport or work or, you know, the volunteers at the fire brigade, who are a merry mixture (Farming Advocate).

Initiatives that connect farmers and non-farmers

It is clear from these results that there is room for improvement in terms of connecting farmers and non-farming publics to strengthen trust, build genuine connections and facilitate dialogue. A few initiatives are already working, farmers' markets, A&P shows and Field Days are popular amongst all respondents (Figure 9). Given the overwhelming association between farming and food and groups' concerns with the affordability of food and cost of farming, farmer's markets, unlike supermarkets which are a complicated space for fostering SLO, have emerged as a site for relationship building.

Figure 9. Attendance at events and activities that connect farmers and non-farmers



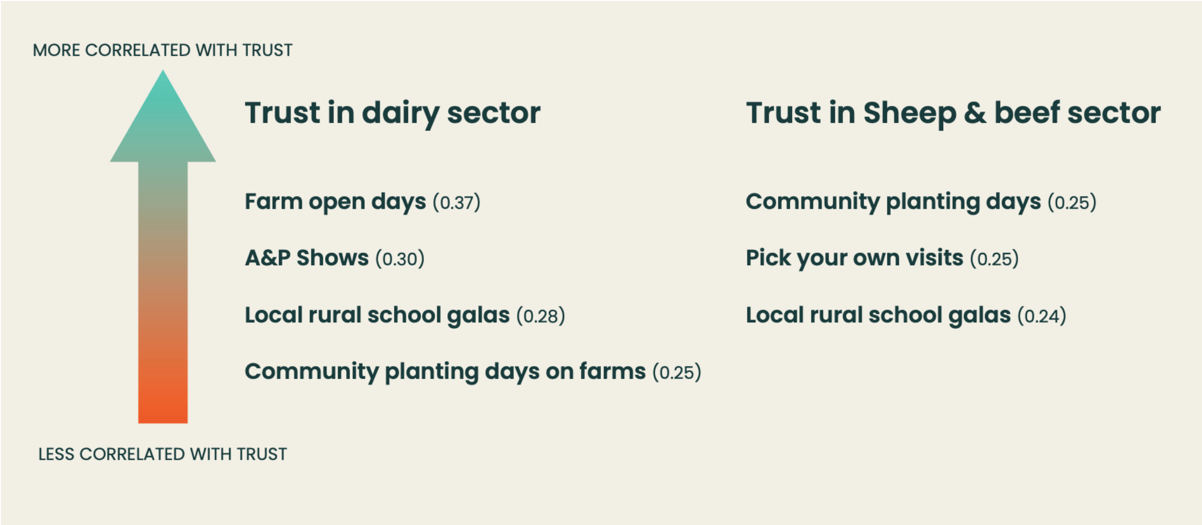
For urban respondents, farmers markets are the primary way in which people interact directly with farmers, while petting zoos, field days, vineyard tours and A&P shows were also popular. By ethnicity, Māori respondents were slightly more likely to attend farmers' markets than non-Māori, but less likely to attend Farm Open Days and community planting days on farms. Demographically, we found that younger respondents (18-25yrs) were less likely to have joined any events, activities or initiatives when compared with older respondents. Not only are young people absent at these events, but comments from the Maniototo and North

Otago A&P Shows also emphasised the lack of young farmers: "Young people not being able to buy farms" and concerns about "Ageing farmers + barriers for younger people getting into farming".

Attendance at an event, or participation in an initiative, that connects publics and farmers does not necessarily result in higher trust and SLO. So, it is important to consider whether different events target different groups, or tend to attract the same people. Amongst our survey respondents, the same people tended to attend A&P shows, farmers markets, Open Farm Days, Field Days, Pick your own, rural school galas, and agricultural tourism. Whereas, vineyard tours and seminars by people in the farming industry attracted different people.

When we examined which activities are correlated with higher trust, we found a moderately strong correlation between Farm Open Days and trust in the dairy sector (Figure 10). While we cannot conclude whether this is causal (ie. we do not know whether people who attend farm open days form a higher level of trust in the sector as a result of attending) or whether people who have greater trust tend to attend these events, this does suggest that the in-person interaction, on-farm, with Farm Open Days may have a positive impact on trust. A&P shows are also a useful site to consider for strengthening rural-urban connections, as these had the second-highest number of attendees across rural and urban respondents, and there is a moderate correlation with trust in the dairy sector. Several activities showed positive correlations with trust in both sheep & beef and dairy, including community planting days on farms and rural school galas, although these activities tend to attract a predominantly rural audience, and thus may not be as strong at building rural-urban-both connections (Figure 10). No activities had positive correlations with trust in the horticulture sector, but this sector already has greater levels of trust than dairy and sheep and beef.

Figure 10. Connection activities and events correlated with trust



The interviews not only affirmed which existing programmes are connecting farmers and non-farmers, but also highlighted the importance of everyday interaction and social connection. Face-to-face on-farm experiences where curious publics meet farmers (such as Open Farms) have achieved greater public understanding of farming and trust. According to a 2020 report, 72% of Open Farm attendees are more likely to buy food directly from a farmer (Eb, 2020). According to an organiser of Open Farm days, attendees are primarily women aged 35-55, bringing their families, and about a third of visitors are recent immigrants, many of Asian and Indian descent. According to this interviewee, open farm days result in "some positive shift in either perception around sustainability, perceptions around the complexity of farming, [or] perceptions around feeling connected to farming".

Beyond initiatives such as Open Farms, that are specifically set up to bring farmers and non-farmers together, everyday forms of interaction are important. Interviewees mentioned examples of these interactions: farm kids going to the same school with urban kids, farmers and non-farmers mixing at rugby club, catchment groups etc. The critical element of these interactions seem to be that they occur locally and are context-based. As one interviewee said:

> But deep down, it's just it's just, you know somebody who's a farmer or you know somebody who's not a farmer. And they're all right. They're actually just like us. That basic human stuff. Everybody's got problems (Hunter and Fisher).

Unlike the initiatives mentioned in the survey, comments such as this one reflect on connections through the lens of commonality as human rather than specifically coming together to discuss farming.

However, not all interactions can, or do, take place in-person. Amongst interviewees there are diverging views about whether, and how, virtual experiences might build trust. Some interviewees felt that digital initiatives cannot provide the same sensory or empathetic experience as in-person farm visits:

> I don't think there is anything that we can do in the digital space that could ever deliver us the same kind of outcomes in terms of, you know, perception change or morale (Open farm entrepreneur).

In relation to what social media and media does not enable, one interviewee also stated:

> which is what the [Internet] cannot do actually. It shapes relationships, that in a way that you don't get that you don't get that empathy. You don't get that this is a good bastard or that's a bad bastard, you just don't get that (Hunter and Fisher).

If the question is whether virtual environments can foster the same level of empathy as in-person farm visits where people can meet face-to-face and 'feel the soil', the answer is: we are not sure. However, we do know that not everyone has the capacity or opportunity to engage in in-person farm visits. So, virtual environments become another mechanism for facilitating connections that might not otherwise be possible. One interviewee recalled an initiative in their child's school classroom whereby farmers present in classrooms via zoom and talk about what is happening on their farm:

> … every Monday, [child's name] came home just beaming because they'd talked to Farmer Susie and she had this many ewes and they were shearing and this and that (Farming Leader).

Virtual environments and social media platforms also provide different ways for farmers to engage with new audiences and publics in a way that is feasible for them. After all, not all farmers have the capacity to host on-farm experiences. As a Virtual Farm Tour Entrepreneur told us:

> Yeah, the honest truth: there are no barriers. So what I did, obviously being on-farm you know, the wifi connection is not great. In 2019 I messaged Elon Musk on Twitter. He responded, and we became the first household in New Zealand [place redacted] to get star link. So we've got about 42 acres and we've got absolute perfect internet connection across 42 acres. Yeah. So technology works, you know. To set up an online business, you might think, well you're going to need $20,000. But I did it for less than a thousand dollars. So I use a selfie stick, you know, a selfie stick costs $25-30 and a cell phone. Every one of us has a cell phone. And that's all the technology that you need. In terms of cultural nuance, I think it's just to be respectful of what

> you say, you've got to prepare. [...] But it works, and people love to see New Zealand farms.

While our research does not solve this debate, we are interested in the ways that virtual platforms and digital media can be used to cross divides and facilitate dialogues. In the end, perhaps it is more about getting the information out there, about making connections, then getting caught up in how those connections are made:

> There's all these things that I don't think we've turned attention to. So I think we need to be open to new forms of media and new ways of learning about farming, and yeah some of that can be digitally driven (Environmental Activist).

A question for future initiatives is then, if we recognise that the local ways in which trust is built through interactions are difficult to apply to large urban areas (where there are not many nearby farms to visit and people are not likely to mix with farmers) and for farmers in isolated rural areas: **how might these interactions be facilitated virtually or in a format that meets the needs of these groups?**

Responsibilities to/of institutions, stakeholders and Māori

Social License encompasses a perception of whether or not expectations of responsibilities are being met. To better understand how people perceive responsibilities of different institutions and stakeholders towards the farming sector and consumers, we asked respondents about whether various entities related to the farming sector are fulfilling their responsibilities to each other (Figure 11).

Figure 11. Are farming sector stakeholders fulfilling their responsibilities (by occupation)

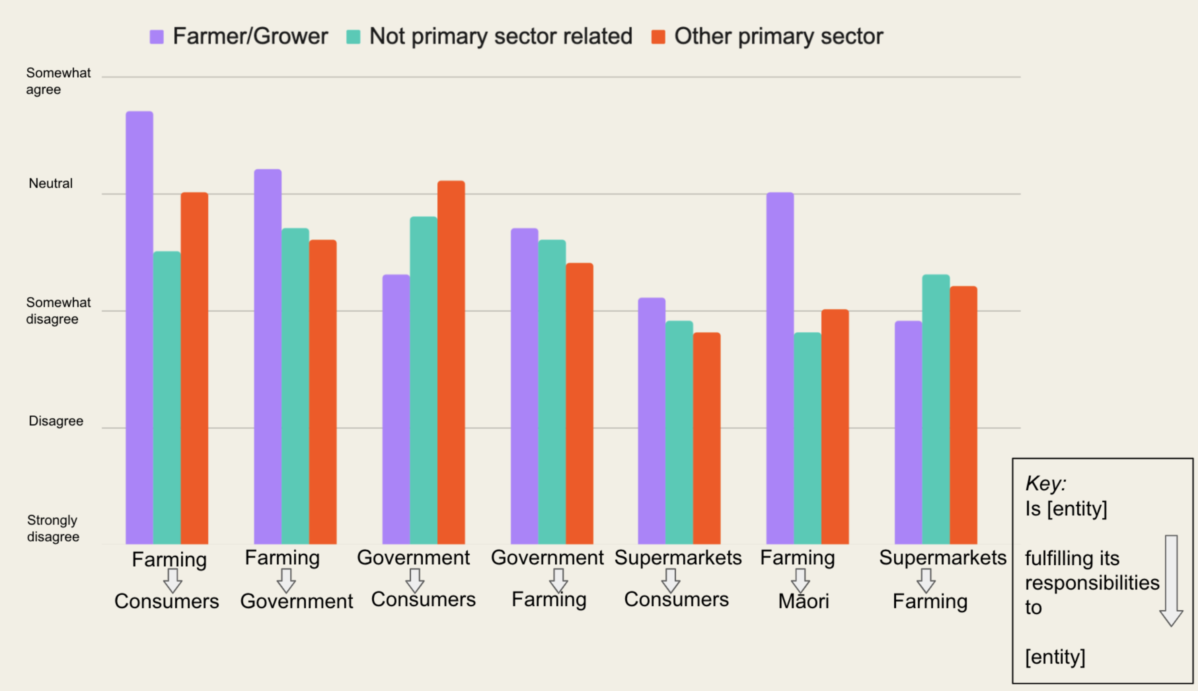


Figure 11 shows some common perceptions amongst farmers and non-farmers; most strikingly, the common perception that supermarkets are not fulfilling perceived responsibilities to consumers or to farmers. There is also common perception that the government is not fulfilling perceived responsibilities to farming (interestingly, non-farmers rated this slightly lower than farmers), and non-farmers also felt that the farming sector is not fulfilling responsibilities to Māori. Māori respondents, on average, disagreed (2.9/7) with the statement that the farming sector is fulfilling its responsibilities to Māori, while other ethnicities somewhat disagreed with this question. On the other hand, Māori respondents were slightly more likely to feel that NZ farming is fulfilling its responsibilities to NZ consumers (slightly agree, 5/7).

While it is beyond the purview of this study to recommend which organisations, institutions, or individuals are best placed to facilitate SLO, people's perceptions of institutions might narrow or broaden their capacity for fostering SLO. Ongoing interdisciplinary studies demonstrate the mutual mistrust between diverse industries and associated stakeholders (Prno & Slocombe, 2014; Owen & Kemp, 2013; Mayes, 2015; Wright & Bice, 2017). The sheer volume of this literature points to a broader theme: that expectations of natural resource-related industries have shifted over recent years. These examples reveal that SLO is inherently tethered to dialogue between industries and the local people who are impacted by their operations. However, this dialogue must be reciprocal and culturally relative to be effective. Therefore, in the study of SLO, there is room for further research that documents connection points between industry and those impacted by them that can serve as conduits for facilitating and strengthening this dialogue and building trust.

Our research revealed that rather than a strong urban-rural divide, antagonism and strong criticisms were oriented more towards institutions and specific industries, ones that are often considered to be promoting or creating an urban-rural divide.

A clear narrative that emerged from open-ended questions in the survey was an unwillingness amongst many farmer respondents to foster SLO, claiming it is not their job or responsibility, or that it was not needed. Rather, they see it as the role of institutions to do this work. As one interviewee said:

> There's probably a little bit of a piece around this, like, 'This isn't my job, this is why we have beef and lamb'. This is why we have these organisations to do this. I'm just a farmer. But that doesn't appreciate that your average urban Kiwi doesn't want to engage with Beef and Lamb New Zealand. They want to engage with you - the real farmer. Hear about your story and learn about what you are doing on the farm (Open farm entrepreneur).

Rather than finding an antagonistic relationship between rural and urban; for example, through survey respondents blaming the other group or leaving vitriolic statements in the open-ended questions, respondents generally showed a more sophisticated understanding of the challenges facing the sector, with both rural and urban respondents noting structural challenges such as climate change, high prices, farm debt, and increasingly tight regulations, and tending to place blame on institutions such as supermarkets, media and government, rather than on the public at large.

Government

Trust is vital among consumers, farmers and governing institutions (de Vries et al., 2019). Governments help establish trust in global markets by legislating policies which promote collective action through interaction and trust and by establishing regulatory bodies that support domestic producers (de Vries et al., 2019). In NZ, government institutions play a crucial role in maintaining public confidence in the agricultural sector through licensing and promoting voluntary changes in response to environmental concerns (Edwards & Trafford, 2016; Manaaki Whenua, 2022). For example, Manaaki Whenua, a Crown Research Institute developed a four-stage SLO framework applicable for a diverse set of industries (Manaaki Whenua, 2022). A case study of the SLO Framework developed with Predator Free

Southland (another government funded programme) exemplifies how stakeholder integration fosters SLO (Manaaki Whenua, 2022). While CRIs are developing roadmaps for building SLO and government-funded programmes are testing them out, the state involvement in international economies complicates these measures. Global capitalism has introduced new governance structures, notably in the dairy industry, where intensification prevails due to global markets and trade agreements. Deregulation compounds the difficulties faced by small farmers in competing (Salou et al., 2017).

As we mentioned earlier, rural respondents, and rural/urban to a far lesser extent, identified government interference as a major concern in the farming sector. A&P Show attendees highlighted these concerns:

> Too many regulations leading to issues that affect how smoothly farms are run (North Otago A&P Show Attendee)
>
> Reactive policy that is not ground tested (Maniototo A&P Show Attendee)
>
> EXCESSIVE RESTRAINTS BY BUREAUCRATS (Palmerston A&P Show Attendee)

Government interference likely refers to the amount of new regulations in recent years that now impact farmers. All the identity and occupation categories, except rural/urban people, believe the government is not really fulfilling its responsibilities to consumers. This lack of belief in government fulfilling its responsibilities may reflect the fundamental level of support New Zealanders have for farmers. For some non-farming public, being critical of government and supporting less government involvement in farming might indicate a lack of faith in the effectiveness of laws and regulatory bodies. It is also notable, however, that survey respondents were often nuanced in their concerns about government's role in farming. Some urban and rural/urban respondents believed the government wasn't doing enough, and some rural respondents called for 'clear guidelines', 'practical policies', and 'doing more to stop overseas buy-up of land'.

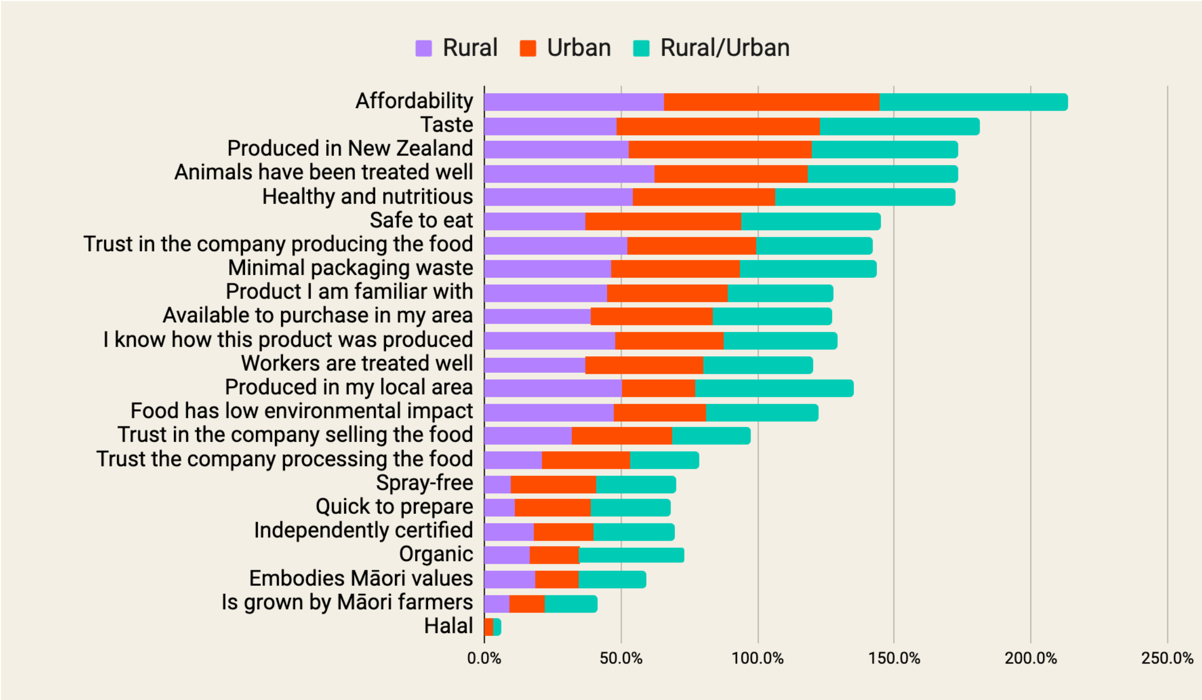
When we examine perceptions about whether farmers are fulfilling their responsibilities to the government, only rural people and farmers agree to some extent. There was also a difference in views amongst those who had lived in NZ for two or more generations compared with those who were first generation New Zealanders. First generation New Zealanders provided slightly higher ratings, on average, to the statement about the government fulfilling its responsibilities to NZ farming ("somewhat agree", 4.2/7; compared with 2nd generation+ NZers scoring "neutral", 3.6/7).

Supermarkets

In many ways, the interplay between agricultural producers and the wider non-farming public sphere is predicated in part on a consumptive relationship that can engender conflicts and challenges. Displaying trustworthiness, an element of SLO, through making evident quality (over quantity) can be achieved through food labelling, certifications, price, appearance, and provenance commonly found in supermarket products (Bray, 2019; Kotilla & Rönni, 2008). Additional information about the origin of a product and the vendor's reputation can also affect public trust in food (Le et al., (2020). Supermarkets could be a valuable site of building SLO through quality communication about the products produced by the farming sector. More than half of urban respondents claimed that information gained while visiting supermarkets shapes their perception of farming. However, the lack of a direct connection between farmers and purchasers often results in a communication breakdown, making it difficult for farmers to rely on supermarkets to facilitate these connections. Furthermore, their capitalist business models may preclude any genuine dialogue and relationship-building in favour of maintaining their bottom line and catering to customers.

We investigated the role of supermarkets in building SLO alongside people's considerations when purchasing food, to gain a better understanding of potential spaces for engagement and dialogue. When asked about their main considerations when purchasing food, respondents overwhelmingly said affordability (Figure 12).

Figure 12. Considerations when purchasing food



In a follow-up open ended question which provided respondents with the opportunity to list up to three considerations that were most important to them in food purchasing, regardless of their previous answer, 31% of responses (n=1055) cited cost of food. It is worth noting that we conducted this survey in December 2022, during a time of general inflation and rising food prices, and this likely impacted results. Still, this is in line with other research that suggests that price continues to be the largest consideration for NZ consumers. This might be the reason why, of the institutions asked about (farming sector; consumers; government; supermarkets), people feel most strongly that supermarkets are not fulfilling their responsibilities to NZ consumers or farmers. The unaffordability of food is commonly blamed on the supermarket duopoloy that exists in NZ. The foods supplied by this duopoly are often challenging to trace and are referred to in the literature as 'food from nowhere' (McMichael, 2009; Campbell et al., 2009). Particularly in urban areas with limited diversity in food supplies, Sharp et al. (2016, p. 134) claim this disconnection has significant environmental, economic and social implications:

> Urban New Zealanders participate in relatively few observable relationships with the origins of their food, its producers or its production, at the expense of environmental, local economy and social values.

And as one interviewee stated:

> There's no link between the producer and the consumer. So if you are talking about the social licence to produce food, consumers have no concept of where the products come from. Other than a country of origin unless you've got packaging and a story that people have engaged with branding. And you don't get branding in cauliflower, or potatoes (Direct-to-market Farmer).

Despite the duopoly of corporate supermarkets in New Zealand's urban food supply, smaller-scale food systems face similar regulations as multinational supermarket chains (Guthrie et al., 2006). Yet, small producers have limited resources to comply with these regulations compared to supermarket conglomerates. In addition, prior research has shown that supermarkets favour products from larger firms over smaller growers in the food supply chain (DuPuis, 2006). Not only do supermarkets limit peoples engagement with farmers and the social, economic and environmental impacts of their food choices, but they also crowd out smaller producers which may better meet the needs of consumers in terms of affordability, taste, local production, etc.: key concerns identified in our survey. The purchasing power of major retailers is a critical barrier to more equitable and better food systems, according to one of our interviewees:

> … at the end of the day, 91% of us get our food from supermarkets, and do our major shopping at supermarkets. We've just had a commerce commission report that has been very blatant in that [supermarkets are] screwing over consumers with unethical pricing, screwing over producers with unethical supplier agreements, all that kind of stuff. So this is quite clearly not a pro-social [licence] system (Open Farm Entrepreneur).

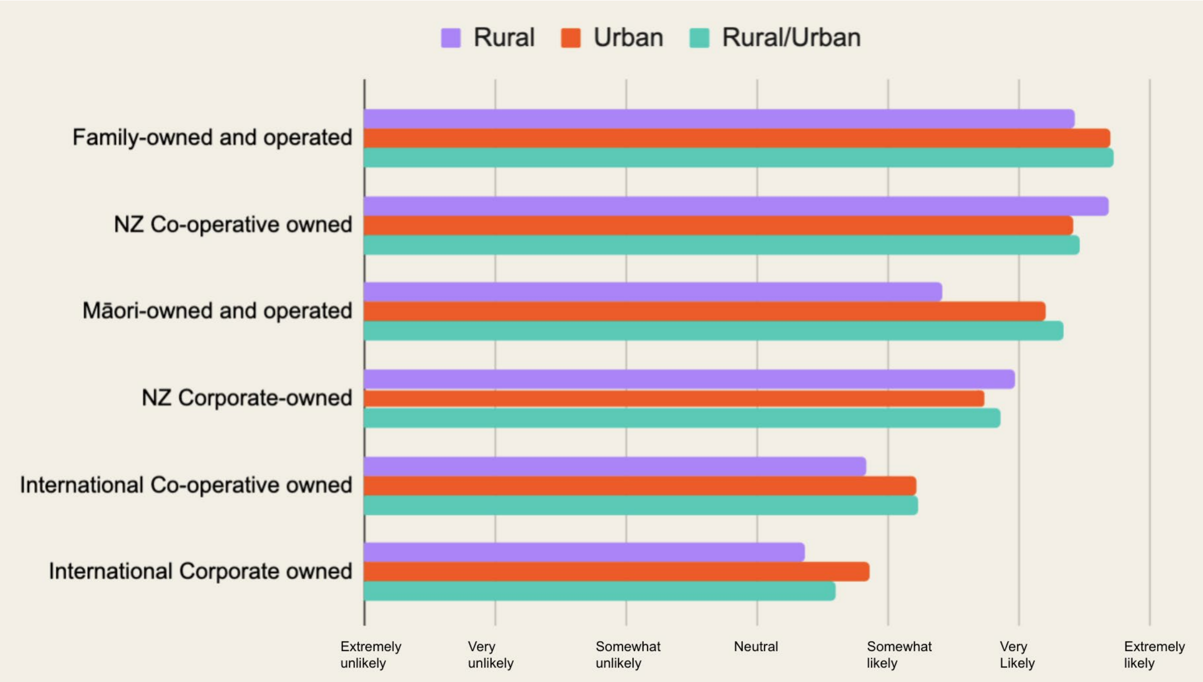
Certainly, supermarkets recognise their positionality as a mediator of connections between farmers and consumers and it can suit their purpose to show consumers that they facilitate or foster connections between farmers and communities. For example, the creation of odd bunch-type schemes:

> … if the crop isn't up to our specifications, it just gets rejected. Okay. So we've started moving away from that and then we've created the brand odd bunch where you get the, the ugly fruit and the ugly vegetables. And that gets a cheaper price. But at the same time we're not going to accept rubbish. So there has been a lot of work done in this space, about what we're accepting into our warehouse or into our stores (Supermarket Manager).

However, as this interviewee goes on to add, ultimately their role as a business is about serving consumers and marketing strategies aimed at identifying farmers and producers to customers is more about selling a product than building relationships or enhancing trust and SLO.

Public dissatisfaction with supermarkets may contribute to survey respondents' support for family owned and operated businesses and NZ co-ops (Figure 13). When asked about their likelihood of purchasing from various company structures of food production, survey respondents were more supportive of family-owned and operated businesses, followed by NZ co-operative owned and Māori owned and operated businesses, and were much less likely to purchase from international corporations.

Figure 13. Likelihood of purchasing from different organisational structures



When we asked consumers about the likelihood they would purchase food from certain types of farms, Māori respondents were more likely to say that they were 'somewhat likely' to 'very likely' to buy food from Māori owned and operated farms (mean 5.5/7). European New Zealanders also said they were 'somewhat likely' on average to buy food from Māori owned and operated farms (mean 5.0/7). However, this data should be considered alongside the caveat that price was noted to be the most common consideration in purchasing food.

Across age ranges and gender, the results were fairly similar. People do care about the fact that food is NZ produced, even if this often comes second to its affordability. There is also a connection to trust. Selling and processing industries are less visible to most people. It therefore makes sense that when we asked about trust, most people identified with trust in the company producing the food rather than the companies that are processing or selling the food (Figure 13).

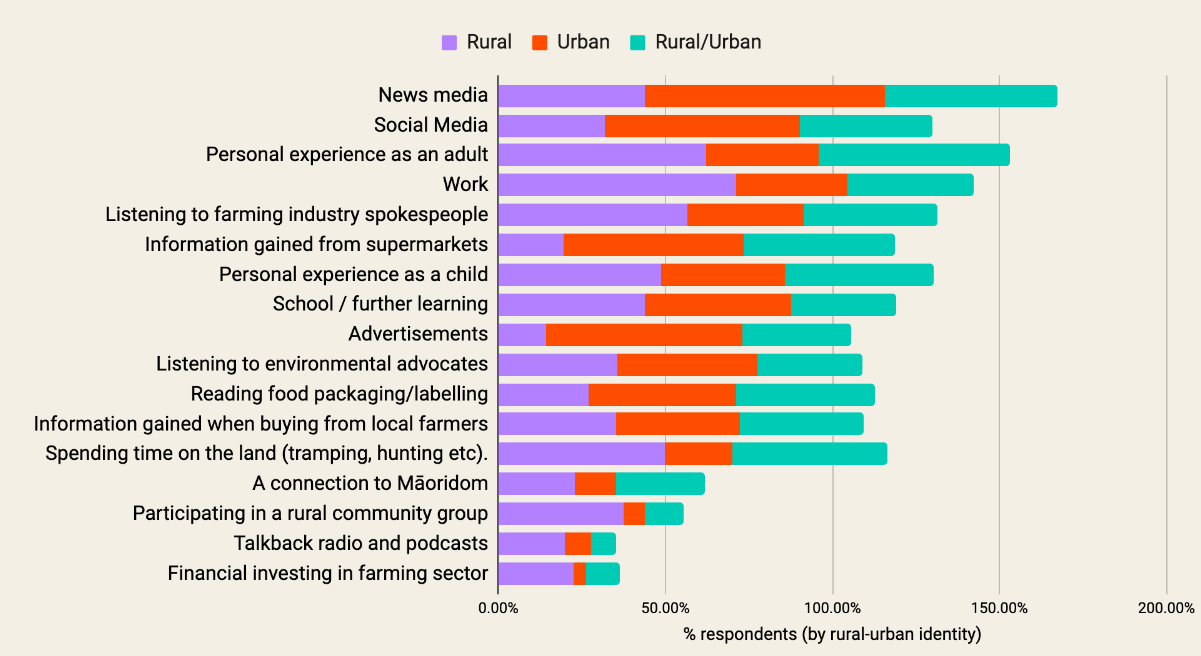
> So in that sense, we know from the people who buy products from us, that they appreciate that, that there's a direct link between the products that they get from us and the animals. So they're not going through, you know, massive factory farming, they're not on an environmental degradation pathway. And so from that point of view, we know that our way of doing stuff is much more acceptable to a lot of people. And it also helps with perceptions. […] So there's a direct supply chain. So we can talk to the people I sell my eggs to. So we have a direct conversation with our consumers (Direct-to-market Farmer).

News media

Government, as an institution, shapes the environment for fostering social licence by funding programmes that design pathways for establishing SLO and choosing whether to implement legislation and regulations that standardise or hinder those pathways. Supermarkets, which might be potential spaces for facilitating trust and connections between farmers and consumers, through information dissemination and farmer-friendly product selection are criticised in our survey responses for greenwashing and unfair purchasing practices. Another institution that both shapes the public's perception of farming and plays a role in fostering SLO - or not - is the media.

In seeking to understand what shapes perceptions of farming, we asked respondents what influences their views of farming in NZ. News media, followed by social media is the primary influence on respondents' views of farming (Figure 14).

Figure 14. What shapes your perceptions of farming?



Interestingly, thirteen diverse sources of influence on people's views all reached more than a third of the sample. Urban respondents were more likely to say that traditional or social media, advertisements, and supermarket information and food labels shape their views of farming. This finding reinforces the centrality of supermarkets as a key stakeholder in SLO, as these institutions are often a continuous point of connection between farmers and consumers. Rural respondents were more likely to cite personal experience and work experience, farming industry spokespeople, and spending time on the land as influencing their views.

Similar trends exist when we break down the responses by occupation and industry. Unsurprisingly, farmers' views are influenced by their personal experience as a child or adult, work experience or farming industry spokespeople. However, those who work in other primary sector occupations are most likely to say that news media, social media, and information gained when visiting supermarkets shapes their views. People who do not work in any primary sector occupations are most likely to say that commercials and news media shape their views.

The major implication here is that urban people and non-farmers' perceptions of farming are more often mediated, through different forms of media, rather than first-hand experience. Despite the proven benefit of initiatives like Open Farms, the majority of New Zealanders still view farmers and the farming sector through the lens of news media. This is particularly relevant for arguments in favour of diversifying the initiatives available for connecting farmers and publics, going beyond on-farm experiences and utilising different forms of social media and virtual platforms. At the same time, these findings point to an ongoing concern about the way news media presents the farming sector, either in a good or bad light, and supports calls for a more nuanced presentation of farming in NZ.

When viewed in relation to trust levels, we find that the largest sources of information that shape perceptions - news media - are associated with significantly lower levels of trust for the sheep & beef sector, and slightly lower levels for dairy, with a positive association with trust in horticulture. Those who say their perceptions of farming are shaped by personal connections and personal experiences are less 'on the fence' when it comes to trust in the sector; they tend to have firmer views either way. While the greatest negative correlation with trust is for those who say their views are shaped by advertisements. It is important to reiterate here that this is correlation, not causation. This negative association is due in part to the greater influence of advertisements amongst non-farmers and urban people (22% of farmers say their views are shaped by advertisements, compared with 60% non-primary sector workers, and 37% other primary sector workers). However, we find a difference in trust levels even amongst urban people when comparing those who say their views are shaped by advertisements and those who do not; this may also signal that advertisements are not a useful way to build trust. We know from the literature that people can often be sceptical of greenwashing with advertisements, and this finding reinforces the need for dialogue rather than one-way presentation.

Not only is it important to understand where people are getting their information from, because of communication's role in building social licence, but *how* these sources of information shape perceptions. Rural people, in particular, are very concerned about misinformation and they feel that the media plays a significant role in spreading misinformation. Open-ended questions and interviews further revealed that these concerns relate to the perceived cherry-picking of statistics and a sense that the media misrepresents the farming sector:

> We're really talking about the quality of engagement and the integrity of the information. Ministry of Environment and StatsNZ are putting information in the public arena, which has the effect of distorting the public and political perceptions of where we're at and the risk is ill informed and ill advised investments of public and private money to fix this (Farming Advocate).

Many interviewees also talked about Country Calendar as a mechanism for disseminating positive farming stories, yet indicated it, too, is sensationalising farming:

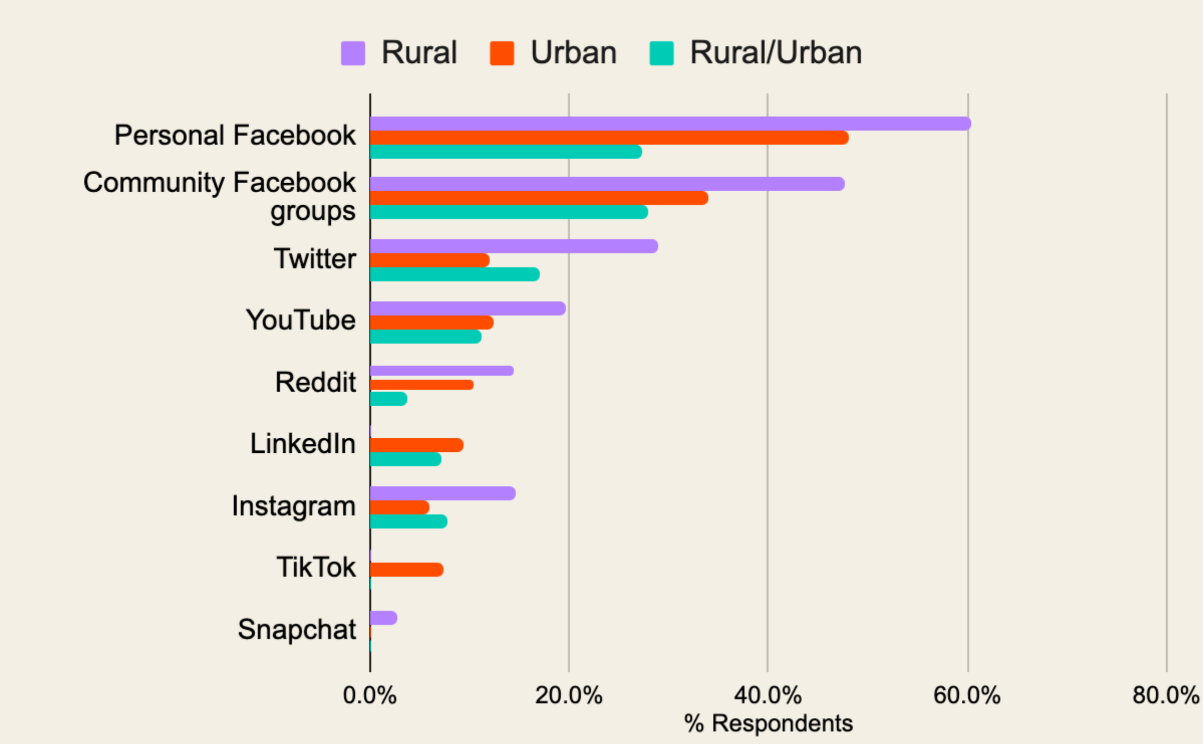
> It's trusted as a source of information for the urban people. So the urban, everybody, in New Zealand watches the country calendar, seven o'clock Sunday night, perfect time. And it's always positive [but] We can't just rely on Country Calendar (Farming Leader).
>
> And most farmers that I come across, don't think [Country Calendar] portrays farming in New Zealand well, or normal, or average, or whatever, and is fringe (Agricultural Consultant).
>
> Country calendar does a good job. Although a lot of farmers scoff at something like Lake Hawea station you know, and say well, they can do it because they are actually rich and they made their money from vodka. We aren't like that. We can't afford to do that (Rural/Urban Academic).

These and other comments point to both the ongoing need for diversity in the stories shared about the farming sector and call for a focus on the everyday experiences of farming. Interviewees argued that positive, but sensational, stories can also have a negative effect by creating the perception that commodity producers do not have an interesting story to tell. Positive and authentically everyday stories are effectively experienced through Open Farms, but there is still a challenge in effectively transmitting them through virtual or asynchronous mediums.

Social media

We asked all those who said that social media shapes their perceptions of farming to respond to a follow-up question asking which social media shapes their perceptions. Although we hypothesised younger respondents may be more likely to use social media, respondents who felt that social media shapes their views were approximately even across the age groups. It is worth noting here that the survey was distributed electronically and was widely advertised across social media platforms, which attracted participants that use these platforms.

Figure 15. Which social media platforms shape your perception of farming?



Among those who indicated social media influenced their views of farming, we found that personal Facebook feeds are most influential, followed by Community Facebook groups. When dis-aggregated by industry, personal Facebook feeds are the most influential, and have more influence on views of farming amongst other primary sector workers, and those who don't work in primary sector occupations, than for farmers. Another area of difference was amongst types of social media: in addition to Facebook, Twitter, Youtube, and Reddit, Instagram is popular amongst rural respondents, but LinkedIn and TikTok are only popular amongst urban respondents.

Research on social media and agriculture demonstrates the widespread adoption of platforms like Facebook, Instagram, and Twitter, enabling consumers to actively engage with producers and co-create content (Malthouse et al., 2016; Stocchi et al., 2018). An analysis of social media use in New Zealand farming reveals distinct dialogue modes across different platforms. Local community Facebook groups play a vital role in fostering community-oriented discourse, facilitating activities ranging from planning to reporting and commenting. For rural New Zealanders, who may face limited connectivity due to geographical remoteness, participating in these groups provides a valuable avenue for dialogue and community engagement. Moreover, Instagram, a popular photo-sharing application, is reported to be gaining traction among farmers' markets and artisan food producers (Pilař et al., 2018).

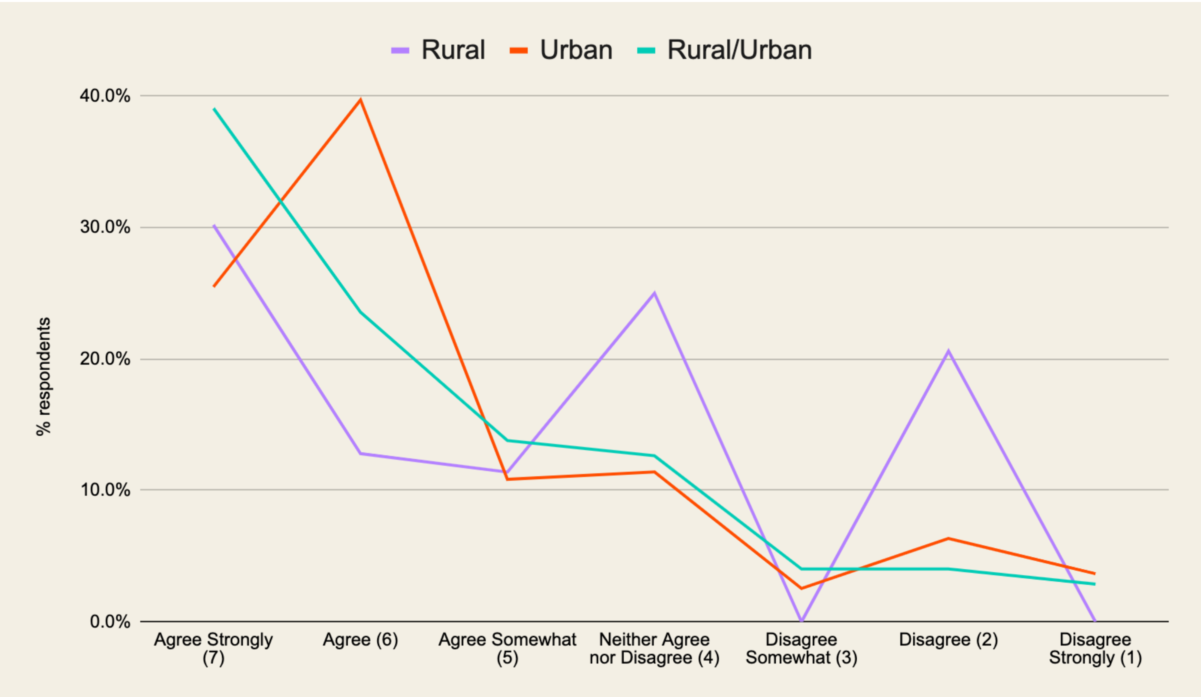
Significantly, social media platforms enable farmers to connect with the broader public by sharing their experiences and engaging in discussions on various agricultural topics, including decision-making and challenges (Riley & Robertson, 2021). In comparison to traditional media, social media has been shown to provide a more comprehensive portrayal of rural life, although there may be a tendency for posts to exhibit a positivity bias that reinforces idyllic perceptions (Riley & Robertson, 2021). However, social media can also expose the less glamorous aspects of farming (Buddle et al., 2018). When examining the influence of social media on trust levels, our research revealed distinct patterns. Among those who feel that social media shapes their perceptions of farming, Instagram is associated with higher levels of trust, while Facebook shows a slight increase in trust, particularly in the horticulture sector. On the other hand, Twitter is correlated with a slight decrease in trust, particularly in the dairy sector. While Twitter can serve as a useful tool for producers and the industry to promote their products, it appears to be less effective in facilitating conversations between producers and the public regarding animal welfare (Buddle et al., 2018).

Farming sector

New Zealand agricultural producers invest heavily in supplying the international market, generating revenue for the country. Indeed, both the employment opportunities created by the sector and its benefit to the economy were specifically mentioned in responses to our question about what people value relative to the farming sector. However, export-oriented production also comes with localised costs that can be perceived to outweigh the benefits, leading potentially to a decline in public confidence and support for agricultural practices. In NZ, this decline is evident in public attitudes towards the quality and necessity of domestically produced food, which are influenced by perceptions of food destined for international markets. Issues related to equitable access to affordable and nutritious food are likely also to further compound these concerns as is evident in other contexts (Rush & Obolonkin, 2020; Smith et al., 2021; Rush et al., 2022; Gerrard, 2022; Graham et al., 2022). To better understand these attitudes we asked about respondents' considerations when purchasing food and whether they feel that farmers have a responsibility to feed New Zealanders first.

Our findings, outlined in the Supermarkets section, reinforce evidence of the public's concern with affordability of food (ranked first) but there was also a strong desire to purchase food produced in NZ (ranked third most important, Figure 12). Responses to our question about feeding NZers first were strong. More than fifty people complained about a perceived bias of the question in their comments. In the open-ended response section, the most common response was discomfort with the question; people talked of feeling “uncomfortable with the words ‘responsibility and first,” of not knowing enough about the issue, and of needing to see this as a complex issue and not “one or the other”. Indeed, as an exporting producer of food, one of the potential tensions in perceptions of NZ farming evident from this survey is the extent to which people perceive the farming sector to have a responsibility to feed NZers first. With the high cost of food and disruptions in supply chains, this debate has become more central in NZ discourse on farming.

Figure 16. Responses to the statement: “The Aotearoa NZ farming sector has a responsibility to feed New Zealanders first before exporting”



Among those who did respond to the question, 29.3% (the second largest category) selected “strongly agree” (Figure 15). This average was fairly consistent across demographic categories, although people born in Aotearoa NZ agreed with the statement slightly more than those born overseas. However, upon closer inspection, we notice that while urban respondents were most likely to “agree” (39.7%), and then sharply dropped in a linear downward trend, rural respondents were split; around a third of rural people “strongly agreed” with the statement, while a quarter of rural people were neutral and 21% disagreed (Figure 12). If we examine the responses by occupation, a higher proportion of farmers “strongly agreed” (36.6%) with this statement than other groups (compared with 20% of people working in other primary sector occupations, and 29% of those with no professional connection to the food and farming sector). Yet, if we look at percentages of those who agreed with the statement (ie. scored between 5 (agree somewhat) and 7 (agree strongly), 58% of farmers agreed, 83.2% of respondents working in other primary sector fields agreed, and 79.8% of respondents not related to the food and farming sector agreed. This suggests (unsurprisingly) that farmers are not a homogenous group. While obvious, it is worth repeating that rural is not synonymous with farmer, and farmers do not all have the same opinions. This is further evidence that the 'urban-rural divide' is not clear at all.

The open-ended responses to this question give some indication of why people rated the way they did. Among rural respondents who strongly agreed with the statement that farmers should feed NZers first, many pointed to the need to “rebalance” and “for certain products, yes, local first”. There was a strong desire from respondents to have “better quality here, not necessarily us first”, and to have greater access if it would make food more affordable.

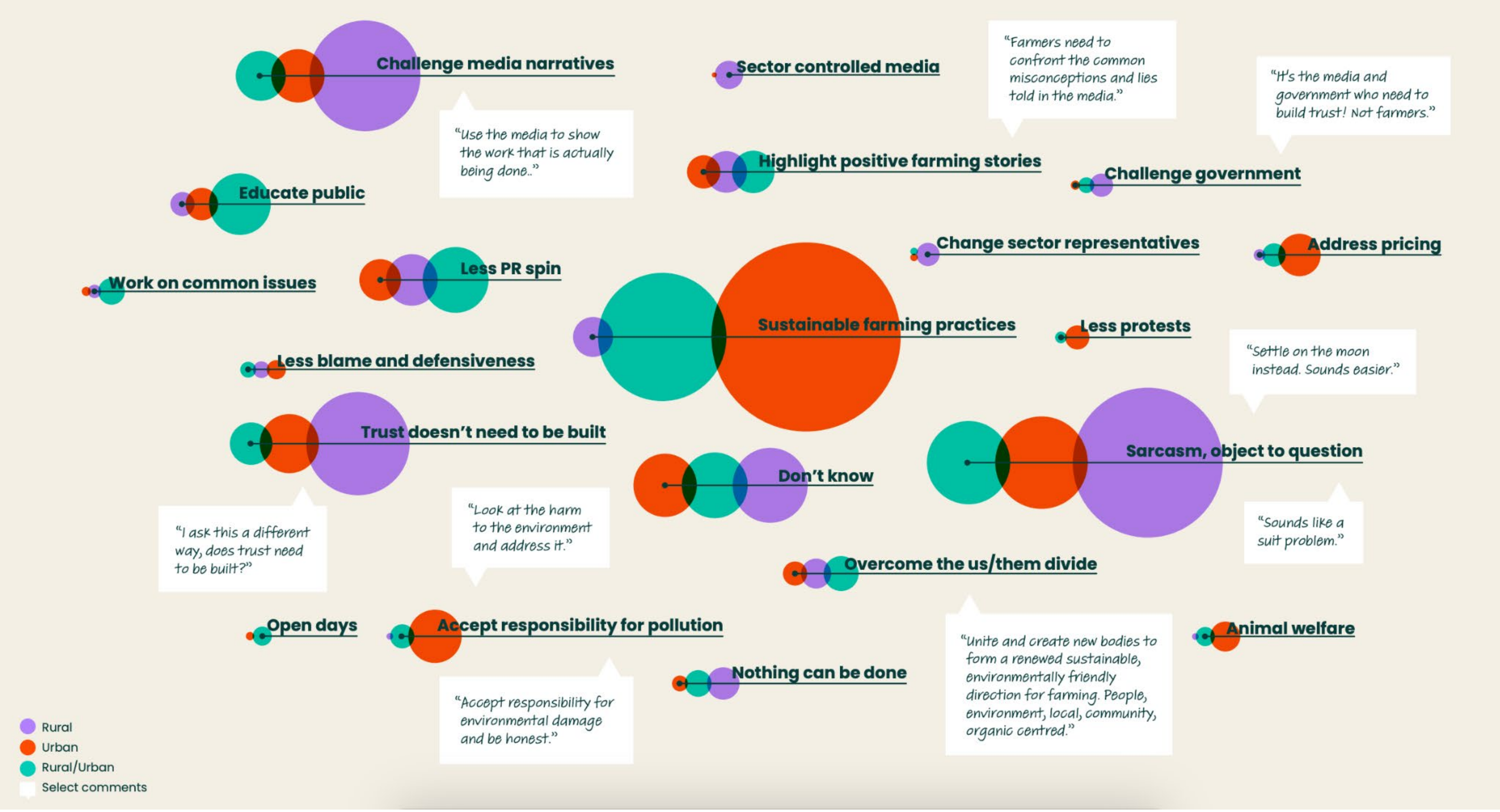
There was also a recognition across respondents that the country is small and relies on exports; “New Zealanders should be supplied with what is needed, but it shouldn't be ranked because this country relies on exports”. Answers also referenced Covid-19 supply chain issues and the vulnerability of a reliance on imported food, as one rural respondent noted, “Covid taught us that we cannot rely on primary sector imports, so we need to provide New Zealanders with healthy, high-quality, lower cost foods.” Environmental concerns about “food miles” and “the waste of international shipping and air freight” featured heavily, and finally, answers that took a moral stance and noted simply: “Because we should look after our own”. These responses highlight the complexity of people’s perceptions of farming and its role in NZ, but they also mirror our findings about the significance of family owned and operated businesses and NZ co-operatives.

Those who disagreed with the statement about feeding New Zealanders first were primarily concerned about the economic impacts of focusing more heavily on the domestic market, arguing that “Farming wouldn’t survive”, “Farmers are in a business with obligations to lenders and their families and as such must get the best returns they can and if that is by exporting so be it”, and “NZ is not big enough to support this”. Many answers gave a need for balance: “I think a slight shift could do wonders for the economy and living costs but I wouldn't put the responsibility on one sector like this. Find a balance between local and exports and see what happens.”

Enhancing trusting relationships: Owning the whole story

Trust is a crucial factor in building social licence. To deepen understanding of the values and concepts that lie beneath people's survey responses, we asked an open-ended question: *"how can the farming sector build trust?"*. Coding these responses revealed areas of convergence and divergence, that together with the results previously discussed provide some potential pathways forward for building a place-based SLO in Aotearoa New Zealand. Figure 17 shows how many times different ideas were mentioned, as well as who said what: the colour of the circle symbolises the groups of respondents (rural: purple, urban: red, or rural/urban: green), while the bigger the circle is, the more comments related to that theme. This allows us to see which themes are common across groups and which themes are felt most strongly by different groups.

Figure 17. How can the farming sector build trust?



We see a clear distinction in ideas for how trust can be built amongst urban and rural respondents. Almost one-third of urban respondents and a quarter of rural/urban respondents pointed to changing farming practices and promoting environmentally sustainable innovation as the most important way to build trust, while rural respondents focused primarily on changing the stories told about farming in the media. This included challenging and changing media narratives (20%, n=341), highlighting positive farming stories (7%), educating the public about farming (6%), and getting different farming voices into the media (7%). This mirrors an overall concern amongst rural respondents with misinformation and is a critical point as 60.5% of our respondents said that news media influences their views of farming.

The second most common narrative from rural respondents was a feeling that trust does not need to be built (12%). Some respondents took affront to the question, with responses that affirmed the sector's job as feeding people rather than building trust: "This question makes me angry! Why does trust need to be built? Isn't food production the job?", while others felt that trust building is not the sector's job, but their responses (focused on communication, transparency, engagement) pointed to trust building:

> I don't think this is a job of the sector but we could do more around discussing the issues, transparency of what is actually being done and less emotional reactions when the blame comes.

Amongst urban respondents, on the other hand, 30% of respondents pointed to changing farming practices and promoting environmentally sustainable innovation as the most important way to build trust, with a focus on the need for regenerative practices, reduction of environmental harms and emissions, and the need to "listen to scientific advice on climate change, ecology, conservation, regenerative/organic farming practices & healthy waterways". This adds nuance to urban people's stated concerns over environmental impact - along with rural and rural/urban respondents. These are the environmental impacts they are primarily concerned about and addressing them, or communicating how they are being addressed, could support SLO. The second most common theme, similarly focused on ecological impacts, concerned taking responsibility for environmental pollution (9.3%).

Amongst rural/urban we see a similar focus on sustainable practices (14%) and a comparatively larger focus on the benefits of educating the public (9%), changing media narratives (7%) and connecting rural and urban communities, for example:

> Show the public that climate change is taken seriously. I'm sure it is but the deniers are louder.
>
> Be honest about old practices and innovations to change those.
>
> I wonder if it's more about what they shouldn't be doing. If the public sees a real effort to do less harm to water, land and air and that farmers are willing to embrace change and innovation and stop avoiding responsibility then the trust will come. Currently a large chunk of the public sees farmers as defensive and arrogant.

In some ways, while the rural/urban identity group should not be considered a middle ground between the perceptions and goals of rural and urban groups, here they do seem to connect with the main targets identified in the two other identity groups. We also see some core themes that are similar across respondents, including: being open and transparent, seeking genuine stories rather than PR spin, and overcoming the us/them divide.

This is one question in which we did find significant gender differences. Everyone emphasised the importance of promoting and rewarding sustainable environmental practices to build trust (16.4% women, 21.4% men; 24% other gender), and men and women also highlighted the need to challenge media narratives (14.7% women, 13.7% men). However, women were more likely to point to the need to accept responsibility for pollution (6% women, 1.9% men), while men were more likely to suggest the government needs to be challenged (5% men, 1.5% women) and to give a sarcastic answer or object to the question (15% men, 7% women).

If we isolate the responses about building trust to those who previously indicated they have low trust (i.e.. those who selected between 1-3 on the Likert scale) in the farming sector, two major courses of action stand out: **implement sustainable farming practices to address environmental harms** and **reduce the amount of PR spin by being open and using facts and science.**

Finally, we asked survey respondents' about their **biggest hope for the future.** The most common answer is that farming practices would be environmentally sustainable (35 responses) and that the sector would continue to produce food and increase their focus on food production (20 responses). An equal number of respondents hoped that farm produce would be more affordable for NZ consumers in future (14 responses), and that farming costs would become lower for farmers (14 responses). This provides nuance to the overwhelming concern with costs we identified. Several of these responses connected the structural challenges of attracting decent prices for sustainably farmed products to enable a high-value sector rather than a "numbers game":

> That we get paid decently for our products so small holdings can survive and the sector doesn't need to be a numbers game anymore.

One agreement amongst urban, rural, and rural/urban respondents was the shifting context of climate change and export market demands requiring agility and the need to "adapt to survive":

> A more agile sector with reference to changing export market preferences, and far greater willingness to take climate change and water quality issues actively. Leadership in such matters will pay dividends in export markets.

> That it will be more than just sustainable, it will be ecologically and socially regenerative, that it will take responsibility for caring for the land, going beyond mono-cropping and pushing back against corporate capitalism.

Very few survey respondents saw farming as a whole negatively; rather, there was a sense that some parts of the sector are letting others down.

> That those giving farming a bad name in regard to welfare, water contamination, excess chemical usage sort their crap out.

> That the farmers who don't and won't or pretend they are changing when they aren't are held accountable.

> Continues to diversify, and best practices are celebrated and bad practices are called out from within the sector.

Conclusions and future plans

What did we learn?

1. In general, people from diverse backgrounds value the benefits the farming sector brings to the country. There is still support for farming and thus possibilities to further strengthen and maintain Social License.
2. However, trust in farming is not strongly correlated with the perception that the sector provides benefits for the country. This has implications for social licence. It suggests that recognition of the benefits farming brings to the

country is not enough alone to secure SLO, and different ways of strengthening SLO must be considered. In particular, those who lack trust in the sector emphasise that implementing and highlighting sustainable practices and avoiding communication that seems like PR spin can build trust. Clear communication and transparency are also key to trust-building.

3. People's perceptions of farming did not differ significantly in our survey across gender, ethnicity nor age. In regards to the cultural dimension of SLO in farming, we did not find evidence of different views for Māori and non-Māori survey respondents. More research is required in this area. We did find that respondents who migrated to Aotearoa NZ as adults showed higher trust in all three farming sectors when compared with those who were born in New Zealand (over and above the effect of other demographic factors such as whether people are rural or urban). This is an interesting finding in relation to diverse perspectives of farming that is often ignored in media and research, and deserves further investigation.

4. We found significant differences in perceptions of farming between rural, urban, and rural/urban participants. In particular, levels of trust were much lower for urban respondents, particularly in dairy and sheep & beef sectors; this does suggest that there are rural-urban distinctions when it comes to SLO in farming. Open-ended questions also showed clear differences in some concerns and values, and in people's ideas for building trust.

5. It is important not to overstate the urban-rural divide, however. There are clear areas of commonality and possibilities for strengthening relationships. We suspected we might encounter antagonistic comments toward rural people or urbanites in the survey, but we did not. Instead, antagonism was oriented more towards institutions like government, supermarkets and media organisations. Furthermore, farmers are not a homogenous group, and the rural sector is also not synonymous with farmers; the survey showed a diversity of views within these groups. The desire of a significant number of people to be identified as 'rural/urban' also shows that many kiwis do not consider these categories to be separate.

6. A place-based approach to building and maintaining SLO could fruitfully use the common ground of food. Across the survey, several commonly held beliefs and perceptions stand out as the basis for dialogue: food and values associated with food production, concerns with environmental issues, costs and animal welfare; and hopes that farming practices will become increasingly sustainable and simultaneously adapt to climate change, while

improving the affordability of locally produced food and reducing production costs for farmers.

7. In both the survey and interviews, there is a perspective that the farming sector is not fulfilling responsibilities to Māori. This is a challenging space that is gaining attention and not sufficiently addressed. Although our research did not reveal any clear pathways forward, we did find that there is significant support for Māori owned and operated farms. Greater research is needed to understand how promotion and support of these enterprises might help fulfil responsibilities.

8. A concern with misinformation and PR spin, combined with our findings that the news media is a major influence on peoples' perceptions of farming, emphasises the need to identify spaces for transparent and genuine interaction and information transmission. While the news media, supermarkets, and food producing corporations that create advertisements could do more to authentically engage with the public, perhaps these are not the best spaces for facilitating dialogue between the farming sector and publics.

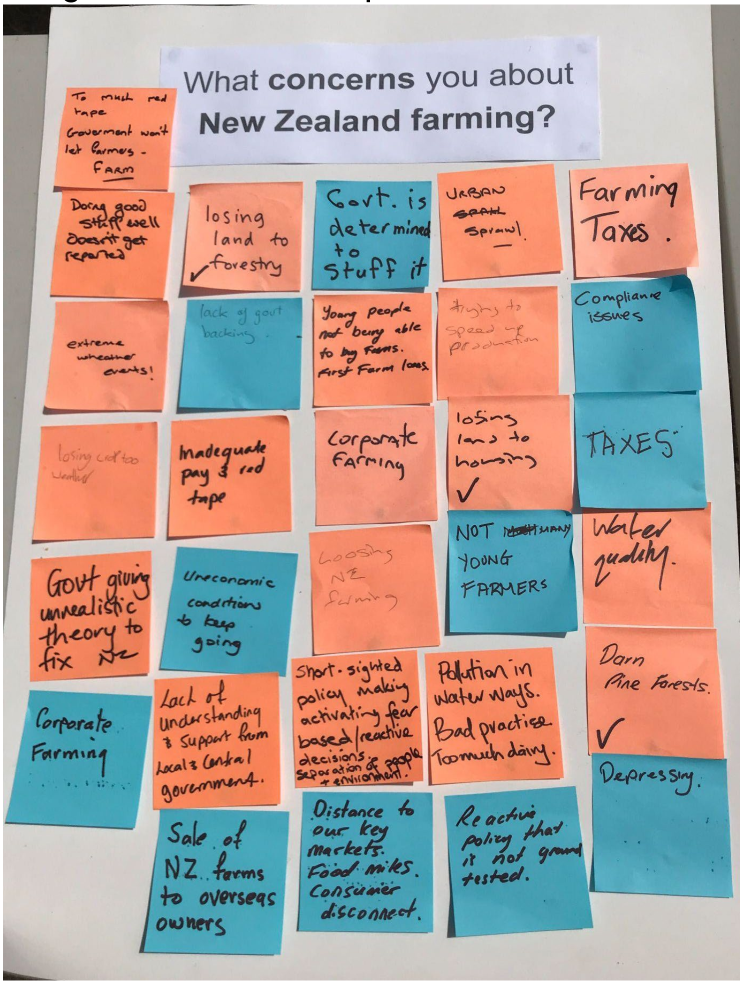
9. Farmers' markets, A&P shows and Field Days were popular amongst all respondents. Open farm days are shown to be a valuable space for dialogue and trust building, but appeal to a limited demographic and are difficult to scale outwards. While hesitations about virtual forums for dialogue are prevalent, we encourage testing out multiple forms of engagement and spaces of dialogue.

Future Plans

Agricultural and Pastoral (A&P) Shows emerged as the second most popular platform for farmers and non-farmers to engage with each other amongst survey respondents. Drawing on our initial survey findings and informed by existing literature on fostering SLO, we devised and carried out a word cloud activity to encourage dialogue. One of our team members attended A&P Shows in Palmerston, Maniototo, and North Otago, where they asked attendees to express their primary concerns and values related to the farming sector on post-it notes. Specifically, they posed the questions: "What are your main concerns about the farming sector?" and "What do you value most about the farming sector?" Participants were encouraged to jot down their thoughts on sticky notes (see for example: Image 1 and 2).

Image 1. Post-it note responses about values from the Maniototo A&P Show.

Image 2. Post-it note responses about concerns from the Maniototo A&P Show.



Through these interactions, we discovered that people genuinely desire engagement in dialogue and emphasise the significance of creating a physical space for such interactions. However, we also observed that people prefer informal interactions, often centred around food, and display less interest in formal dialogues or interviews.

For the next stage of this project, we are developing a version of the word cloud dialogue activity that can be experienced both asynchronously, as part of a guided discussion, virtually and in-person. The activity will be in the form of an exhibition, where a series of three graphics that summarise our survey results associated with the questions: 1) What do you value most about the NZ farming sector? 2) What concerns you most about the NZ farming sector? and 3) How can the NZ farming sector build trust? will be displayed alongside an interactive media presentation. The media presentation will summarise the key findings of this research and showcase interview quotes and soundbytes that provide nuance to the survey results and real voices representing the diversity of views on this topic. The exhibition will be designed so that public visitors can interact with the material and add their own ideas. In addition, we will host a scheduled event held both in-person and virtually to discuss our findings and engage in a guided dialogue around the graphics. The exhibition and future tools we create will be designed so that people can interact and continue to add ideas, thereby creating ongoing dialogue.

Limitations of the study

There are a few key limitations in our study. Our survey was conducted solely online and advertised through social media. It is possible that people who take surveys online and through social media may have stronger feelings about the topic under consideration. Using Facebook as the mode of dissemination may also have influenced or skewed responses to our question about social media shaping perceptions. We also recognise that internet access and mobile data reception is not equally experienced throughout NZ. We tried to account for potential gaps, especially amongst rural and under-serviced participants by oversampling for the rural identity group. Finally, despite our efforts to interview a variety of stakeholders, partners, and organisations that would represent diverse views on farming, our interviewees are mostly from the farming sector, with one interviewee from the supermarket sector, one from an environmental group, and two urban and two urban/rural respondents from the survey.

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Appendices

Appendix I. Logistic regression models for trust in farming

Trust in Horticulture Logistic Regression final model

link	threshold	nobs	logLik	AIC	niter	max.grad	cond.H
logit	flexible	1154	-1684.10	3414.21	7(0)	2.11e-10	1.8e+06

	Estimate	Std. Error	z-value	Pr(>|z|)	
Work farmer/hort	-0.1255354	0.1742863	-0.720	0.471351	
Work Other primary sect.	0.2635200	0.1898547	1.388	0.165134	
Male	0.0228388	0.1077171	0.212	0.832087	
Other gender	-0.6802409	0.5608029	-1.213	0.225139	
Māori	0.3848771	0.2112523	1.822	0.068473	.
NZ European	-0.0057097	0.1825457	-0.031	0.975048	
Other Ethnicity	-0.0274995	0.2646130	-0.104	0.917230	
Other European	-0.1865268	0.3455480	-0.540	0.589335	
Pasifika	0.0978846	0.2433419	0.402	0.687499	
Adult Migrant	0.8210563	0.2280462	3.600	0.000318	***
Child Migrant	1.981290	0.2818564	3.93	2.07e-12	***
2+ generations NZ	-0.3437298	0.2015241	-1.706	0.088073	
Visiting NZ	1.859194	0.3778914	4.92	8.66e-07	***
An urban person	-0.571014	0.1795029	-3.181	0.001467	**
Combination rural/urban	-0.2967334	0.1968181	-1.508	0.131643	
Age (decades)	-0.0004552	0.0029253	-0.156	0.876350	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Trust in Dairy Logistic Regression final model

link	threshold	nobs	logLik	AIC	niter	max.grad	cond.H
logit	flexible	1154	-1951.00	3948.01	6(0)	3.06e-13	1.6e+06

	Estimate	Std.Error	z value	Pr(>|z|)	
Work no primary sect.	-0.251569	0.171911	-1.463	0.14337	
Work other primary sect.	-0.206253	0.187155	-1.102	0.27044	
Male	-0.051380	0.106351	-0.483	0.62901	
Other gender	-0.503156	0.540811	-0.930	0.35218	
Māori	0.180369	0.205097	0.879	0.37916	
New Zealand European	0.128230	0.177780	0.721	0.47073	
Other ethnicity	0.079889	0.264421	0.302	0.76256	
Other European	-0.138843	0.345139	-0.402	0.68748	
Pasifika	-0.158642	0.241237	-0.658	0.51078	
NZAdult Migrant	0.523338	0.262776	1.992	0.04642	*
NZChild Migrant	-0.800703	0.282133	-2.838	0.00454	**
2+ generations NZ	-0.537901	0.235991	-2.279	0.02265	*
Visiting/Temporary	0.108339	0.375161	0.289	0.77275	
An urban person	-1.320950	0.182624	-7.233	4.72e-13	***
Combination rural/urban	-1.656505	0.195837	-8.459	< 2e-16	***
Age	0.001614	0.002854	0.566	0.57167	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Trust in Sheep and Beef Logistic Regression final model

link	threshold	nobs	logLik	AIC	niter	max.grad	cond.H
logit	flexible	1154	-1761.44	3568.87	6(0)	1.68e-10	1.7e+06

	Estimate	Std.Error	z value	Pr(>|z|)	
Work not primary sect.	-1.169850	0.177497	-6.591	4.37e-11	***
Work other primary sect.	-0.389521	0.184935	-2.106	0.0352	*
Male	0.028368	0.107935	0.263	0.7927	
Other gender	-0.028918	0.539285	-0.054	0.9572	
Māori	0.092906	0.208303	0.446	0.6556	
New Zealand European	0.175095	0.180006	0.973	0.3307	
Other ethnicity	0.212500	0.266069	0.799	0.4245	
Other European	0.140585	0.334387	0.420	0.6742	
Pasifika	-0.139904	0.245743	-0.569	0.5691	
NZAdult Migrant	1.118141	0.213763	5.231	1.69e-07	***
NZChild Migrant	-0.233958	0.238888	-0.979	0.3274	
2+ generations NZ	0.106565	0.182218	0.585	0.5587	
Visiting/Temporary	-0.282326	0.354330	-0.797	0.4256	
An urban person	-1.441011	0.181587	-7.936	2.09e-15	***
Combination rural/urban	-1.711985	0.195982	-8.735	< 2e-16	***
Age	0.002658	0.002902	0.916	0.3598	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1