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PROGRAMME

DAIRY DIVERSIFICATION INTO RAW AND PASTURIZED ON FARM MILK SALES

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Executive Summary

This report, developed as part of the Kellogg Rural Leadership Programme, investigates the feasibility and future potential for New Zealand dairy farmers to diversify into raw and pasteurized milk sales directly from the farm gate. In an era marked by volatile international dairy markets, increased regulatory pressures, environmental accountability, and shifting consumer expectations, the traditional reliance on milk payouts alone is becoming increasingly unsustainable for many farmers. As such, exploring alternative income streams is both timely and necessary.

The study employs a mixed-methods approach, including in-depth interviews with seven on-farm milk producers and industry experts, a consumer survey, and a comprehensive literature review. It aims to provide a practical, evidence-based overview of how direct-to-consumer milk sales can supplement farm income, enhance resilience, and support a values-driven food system.

Key findings reveal that while on-farm milk sales are still a niche sector in New Zealand, there is growing consumer appetite for local, traceable, minimally processed dairy products. Consumers purchasing directly from farms are motivated by a combination of taste, health perceptions, sustainability concerns, and a desire to support local agriculture. Products like raw milk and A2 pasteurized milk in reusable packaging appeal especially to health-conscious families and environmentally aware buyers. Many farmers report strong brand loyalty, repeat purchasing, and willingness among consumers to pay a premium for these products.

However, the report identifies significant barriers to entry, especially regarding compliance with New Zealand's regulatory frameworks. The 2015 Raw Milk for Sale to Consumers Regulations and the Animal Products Act impose substantial financial and administrative burdens on small-scale producers. Farmers selling raw milk must register under a Regulated Control Scheme (RCS), undertake rigorous microbial testing, and restrict sales to direct, non-retail channels. For those processing pasteurized milk on-farm, compliance involves establishing a Risk Management Programme (RMP), meeting stringent facility design and hygiene requirements, and undergoing ongoing audits.

Operational demands are also considerable. Farmers must invest in fit-for-purpose infrastructure, including pasteurizers, bottling lines, cold storage, and delivery vehicles. They must also manage customer relationships, logistics, marketing, and compliance records—often requiring a shift in mindset from solely farming to running a multi-faceted small business. Many interviewees emphasized that these ventures are not "side hustles" but second full-time jobs requiring dedication, adaptability, and business acumen.

Through case studies, the report highlights a range of successful on-farm milk ventures, from Village Milk's raw milk vending model to Canterbury's Choice pasteurized milk delivery service, and Happy Cow Milk's modular, tech-enabled processing concept. These case studies illustrate that success in this space depends on innovation, regulatory navigation, and strong consumer engagement. Farmers who succeed often possess an entrepreneurial mindset, a deep connection to their customer base, and the ability to differentiate their product through ethical branding and storytelling.

The study concludes that on-farm milk sales are financially viable and socially valuable, but only for farmers who can access capital, manage compliance, and build consumer trust. For broader adoption, structural support is needed. This includes more scalable and risk-proportionate regulation, access to appropriate small-scale processing equipment, shared infrastructure models, and extension services or mentorship networks to reduce the steep learning curve.

Recommendation**s** are grouped into three categories:

1. **For farmers**: Start with feasibility assessments and pilot models; seek peer mentorship; invest in fit-for-purpose infrastructure; and plan for intensive customer engagement.
2. **For industry and policymakers**: Introduce more flexible compliance models for small operators; support innovation through funding or co-design; and develop regional networks to share knowledge and infrastructure.
3. **For future research**: Investigate modular processing solutions, test consumer willingness-to-pay at scale, and assess the long-term sustainability and environmental impacts of on-farm milk ventures.

Ultimately, on-farm milk diversification is not a universal solution—but for the right farmer, in the right place, with the right support, it offers a compelling pathway toward financial resilience, consumer connection, and sustainable food production.

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1. Introduction

1.1 Background

The New Zealand dairy industry has long been a cornerstone of the national economy, generating billions in export revenue and underpinning rural communities across the country. However, increasing volatility in global dairy markets, environmental regulations, shifting consumer expectations, and pressure on farmgate milk prices have prompted many farmers to reconsider traditional business models. The reliance on the dairy payout alone to sustain farm profitability is becoming less secure in an increasingly complex and competitive environment.

In response, diversification has emerged as a viable strategy for improving resilience and creating supplementary income streams. One growing area of interest is the on-farm sale of raw and pasteurized milk directly to consumers. This model not only offers an alternative revenue source but also fosters closer connections with local communities and consumers, aligning with trends toward transparency, traceability, and support for locally produced food.

1.2 Purpose of the Study

The primary aim of this study is to explore what is currently happening on farm and the future potential for New Zealand dairy farmers to diversify into on-farm raw and pasteurized milk sales as a means of supplementing income outside of the traditional dairy payout. The research investigates market demand, consumer attitudes, regulatory considerations, operational requirements, and financial feasibility. It also examines the challenges and opportunities that farmers may encounter when pursuing this pathway.

By combining a literature review, case studies, and consumer insights, this project seeks to provide a practical, evidence-based overview of the diversification potential in this space. It is intended to serve as a resource for farmers considering this transition, as well as for industry bodies and policymakers interested in supporting innovation at the farm gate.

1.3 Relevance to the New Zealand Dairy Sector

New Zealand's pastoral-based dairy system is admired globally for its efficiency, but its heavy reliance on commodity exports leaves it vulnerable to price swings and external pressures. Diversification through on-farm milk sales into the domestic market offers a promising avenue for adding value and building resilience within the sector. It allows farmers to capture more of the value chain, respond directly to consumer trends, and build more sustainable business models.

This project is particularly relevant at a time when the industry is under increasing scrutiny—environmentally, socially, and economically. As consumers seek greater transparency in food production and governments push for more sustainable land use, the ability to innovate and adapt will be key to the sector's long-term viability. Exploring alternative income sources like on-farm milk sales could play a crucial role in ensuring the future prosperity of New Zealand dairy farming.

2. Objectives and Project Scope

2.1 Research Objectives

The primary objective of this project is to explore the feasibility, opportunities, and challenges associated with diversifying into on-farm raw and pasteurized milk sales as a means of supplementing income outside of the traditional dairy payout system. This includes understanding market demand, regulatory requirements, infrastructure needs, consumer perceptions, and economic viability.

The key research objectives are:

- **To investigate** the drivers behind the increasing interest in on-farm milk sales, particularly in the context of income volatility in the dairy sector.
- **To assess** the market potential and consumer demand for raw and pasteurized milk sold directly from farms in New Zealand.
- **To evaluate** the legal and regulatory framework governing the sale of raw and pasteurized milk, including food safety and labelling requirements.
- **To examine** the practical considerations of implementing on-farm milk sales, including equipment, staffing, animal welfare, and supply chain logistics.
- **To conduct** a comparative analysis of profitability between conventional dairy payout income and potential revenue from direct-to-consumer milk sales.
- **To identify** potential risks, limitations, and barriers to entry that could impact the success of such a diversification strategy.
- **To provide** recommendations for farmers considering on-farm milk sales as a way to enhance resilience and long-term sustainability.

2.2 Scope and Limitations

This research focuses on the diversification of income for New Zealand dairy farmers through the direct sale of raw and/or pasteurized milk from their farms. While it touches on international trends and examples, the core emphasis is on New Zealand's regulatory, economic, and social landscape.

Scope:

- Farm-based operations producing bovine milk for local consumption.
- Both raw (unpasteurized) and pasteurized milk offerings.
- Sales models including farmgate, vending machines, subscriptions, and local deliveries.
- Regulatory compliance and food safety practices specific to New Zealand.
- Case studies from New Zealand farmers who have implemented similar systems.

Limitations:

- The project does not explore other forms of on-farm diversification (e.g., cheese-making, agritourism, or plant-based alternatives).
- The scope does not extend to large-scale commercial processing facilities or long-distance distribution models.
- Financial analysis is based on indicative models and case study data, not full business plans or audited financials.
- Consumer research may be limited by sample size and geographic spread.

2.3 Methodology Overview

This project employs a **mixed-methods approach**, combining qualitative and quantitative data to provide a well-rounded analysis.

Primary research methods include:

- **Semi-structured interviews** with farmers currently selling raw or pasteurized milk on-farm.
- **Consultation** with regulator (MPI)
- **Consumer surveys** to gauge demand, willingness to pay, and purchasing habits.

Secondary research includes:

- **Literature review** of academic, industry, and government publications.
- **Analysis of regulatory documents** from MPI, and other relevant bodies.
- **Case study comparisons** to illustrate diverse approaches and outcomes in New Zealand.

Data will be analysed using thematic analysis for qualitative inputs and basic financial modelling for quantitative assessments. The aim is to deliver a balanced and practical guide for farmers evaluating on-farm milk sales as a viable diversification strategy. Interviewees signed the Kellogg RL consent and all results are anonymised.

3. Literature Review

3.1 Overview of On-Farm Milk Sales

On-farm milk sales refer to dairy farmers selling milk directly to consumers, either as unpasteurised “raw” milk or pasteurised milk processed and bottled on the farm. This model of dairy diversification enables farmers to capture more value from their product by bypassing conventional processing and retail chains (Village Milk, n.d.). Historically, New Zealand’s fresh milk was delivered locally via milk runs, but deregulation of milk vending in the 1980s shifted distribution towards supermarkets (Radio New Zealand [RNZ], 2023). More recently, there has been a resurgence of farm-direct milk sales driven by consumers’ growing interest in fresh, local products and by farmers’ need to stabilise income amidst global market volatility (Village Milk, n.d.).

Farmers are increasingly targeting niche markets with farm-fresh milk, promoting features such as minimal processing, A2 protein milk, organic production, and sustainable packaging (RNZ, 2023). Raw milk, although a niche segment, has shown notable growth. Before 2016, raw milk could be legally sold under an old exemption for farm gate sales (up to 5 litres per person per day), a provision originally intended for remote areas (ABC News, 2015). Entrepreneurs soon expanded this into self-serve vending machines and “raw milk clubs” that offered milk via drop-off points or on-site pick-up. Village Milk, founded in Golden Bay, was selling up to 300 litres of raw milk daily through its on-farm vending system by the early 2010s (ABC News, 2015).

These early raw milk ventures underscored both strong consumer demand for unprocessed milk and the importance of high hygiene standards. Village Milk, for example, reported no health incidents in its first four years and maintained strict cleaning protocols and frequent testing (ABC News, 2015). While raw milk remains a small part of overall milk consumption in New Zealand, it has attracted a loyal following.

In addition to raw milk, some farmers have pursued on-farm pasteurisation to broaden their market reach beyond the farm gate. By installing small-scale processing and bottling facilities, these producers can supply farmers’ markets, local shops, or home delivery customers while meeting food safety standards for pasteurised milk. One prominent example is Canterbury’s Choice, a farmer-run operation that launched in 2019 and now delivers more than 2,000 bottles of A2 milk daily in reusable glass bottles across Christchurch (RNZ, 2023). Starting as a one-person operation, it now supplies major institutions like the University of Canterbury, which selected the brand for its sustainability credentials (RNZ, 2023).

On-farm milk sales, whether raw or pasteurised, represent a blend of traditional direct selling with modern niche branding. They offer consumers a connection to local food sources and provide farmers with a path to diversify income. However, these benefits come with challenges, particularly in ensuring regulatory compliance and food safety. The next section will examine New Zealand’s regulatory frameworks governing raw and pasteurised on-farm milk sales.

3.2 Regulatory Frameworks

New Zealand maintains a strict regulatory framework for raw and pasteurised milk sold directly from farms to consumers. These regulations are designed to balance consumer choice with public health protection, ensuring food safety without entirely prohibiting access to unpasteurised (raw) milk or farm-processed pasteurised milk.

Raw Milk Regulations

Raw drinking milk is classified as a high-risk food in New Zealand due to the potential presence of harmful pathogens. In response to increasing demand and associated health risks, the Ministry for Primary Industries (MPI) implemented the Raw Milk for Sale to Consumers Regulations in 2015, which took full effect in November 2016 (MPI, 2016). These regulations require raw milk suppliers to register with MPI and operate under a Regulated Control Scheme (RCS).

Under this scheme, suppliers must meet several conditions: maintain strict on-farm hygiene, routinely test milk for pathogens, label products with health warnings, and retain detailed sales records (Consumer NZ, 2016). The sale of raw milk is limited to direct-to-consumer models—either at the farm gate or via home delivery from the farm to a local address. Third-party depots or retail outlets are prohibited (MPI, 2016). Additionally, suppliers may not export raw milk, and a 5-litre daily limit per customer exists to prevent commercial resale (ABC News, 2015).

Compliance is monitored through registration, record keeping, and audits. As of January 2020, only 26 farms were registered to sell raw milk legally in New Zealand (MPI, 2020). The high cost of compliance, estimated at $10,000 to $20,000 annually, equates to approximately 20% of a small raw milk operator's gross profit (MPI, 2020). As a result, many small-scale sellers exited the market after 2016 (AUSRawMilk.org, 2018).

Notably, enforcement has been strict. In 2020, a Campylobacter outbreak linked to a raw milk supplying farm from unregistered raw milk sales led to illness among several consumers. Despite earlier warnings from MPI, the farm had operated using a “cow-share” loophole, attempting to circumvent regulation (RNZ, 2020). Following the outbreak, the farm was prosecuted, and its director was fined $27,500 (RNZ, 2022). This enforcement action highlights the non-negotiable nature of regulatory compliance in raw milk sales.

Pasteurised On-Farm Milk Regulations

Farmers who pasteurise and bottle milk on-site face a different but equally rigorous set of standards. These operations must comply with the Animal Products Act and the Food Act, which require the implementation of a registered Risk Management Programme (RMP) tailored to dairy processing (MPI, 2016).

Setting up an on-farm pasteurisation facility involves compliance with multiple regulatory codes, including NZCP1 for farm dairies and additional codes for premises design, pasteurisation, and hygiene (Milking on the Moove, 2020). Farmers must establish a facility that meets sanitary requirements, develop a Hazard Analysis and Critical Control Points (HACCP) plan, and undergo inspections and product testing.Many early adopters found the paperwork and infrastructure demands daunting. Glen Herud of Happy Cow Milk described

the process of setting up dual RMPs (for milking and pasteurisation) as akin to “running your own dairy company” (Milking on the Moove, 2020). Compliance costs include construction or retrofitting of a pasteurisation room, acquisition of certified equipment, and ongoing audit fees.

Unlike raw milk, pasteurised milk can be distributed widely—through retail stores, institutions, and delivery routes—provided all safety and traceability standards are met. This allows a broader customer reach and supports scaling of the operation.

Some cooperatives, including Fonterra, now allow farmers to opt out a small volume of milk for independent on-farm processing without breaching their supply agreements (NZ Herald, 2022). This flexibility has enabled more farmers to explore pasteurisation and value-added dairy products as an income diversification strategy.

Summary

New Zealand’s regulatory framework for on-farm milk sales reflects a public health-first approach while still enabling diversification for farmers. Raw milk regulations are stringent due to the associated risks and have forced some market exits. Pasteurised milk regulations, while complex, offer greater market access and flexibility. Farmers entering either domain must be prepared to invest in infrastructure, systems, and professional food safety practices to meet regulatory expectations.

3.3 Consumer Trends and Demands

Consumer preferences are central to the rise of on-farm milk sales in New Zealand. A growing segment of the population is seeking food that is local, minimally processed, and ethically produced. These values align closely with the characteristics of both raw and pasteurised milk sold directly from farms. This section explores key consumer motivations and market trends contributing to this demand.

Health and "Natural" Food Trends

One of the primary drivers of raw milk consumption is the belief that unpasteurised milk is more “natural” and nutritionally superior. Advocates claim it retains beneficial enzymes, probiotics, and vitamins that may be lost during pasteurisation (AUSRawMilk.org, 2018). A 2019 MPI survey reported that 90% of raw milk consumers felt the health benefits outweighed the risks, and 92% perceived the risk of illness as low (AUSRawMilk.org, 2019). Nearly all respondents (97%) trusted the safety of the raw milk they consumed.

These beliefs often tie into wider lifestyle and dietary movements that value unprocessed or whole foods. Consumers frequently cite raw milk's supposed benefits for gut health or allergies, although mainstream science and public health authorities have found no evidence that raw milk is nutritionally superior to pasteurised milk (AUSRawMilk.org, 2019; Prime Minister’s Chief Science Advisor, 2019). Regardless, the emotional and philosophical appeal of raw milk as a "pure" food continues to attract a niche but loyal customer base.

Taste and Freshness

Taste and freshness are also strong motivators. Farm-direct milk, whether raw or pasteurised, is typically consumed within 24-48 hours of milking, resulting in a noticeably fresher product than supermarket alternatives. Non-homogenised milk, where cream rises to the top, is seen by many as a quality hallmark reminiscent of traditional dairy experiences (NZ Herald, 2021).

Farmers report that local demand often exceeds supply. For example, Wholy Moo, a Northland raw milk producer, sold out its first batch of 150-200 bottles almost instantly, driven largely by taste-seeking consumers nostalgic for "real milk" (NZ Herald, 2021). Similar patterns of early sell-outs and repeat customers are frequently reported by small dairies across the country.

Localism and Trust

Consumers purchasing directly from farms often do so out of a desire to support local economies and to know more about the origin of their food. Buying milk from a nearby farm gives people a sense of connection and transparency, they can see where the cows live, how they are treated, and often interact with the farmer directly. This creates a level of trust not easily replicated in the anonymous supermarket supply chain (AUSRawMilk.org, 2019).

This trust is especially pronounced among raw milk buyers, who are aware of the legal and health-related debates but feel confident in “their” farmer’s standards. Online communities and social media platforms also play a role in connecting consumers with producers and building loyalty through shared values.

Scale of Demand and Demographics

Despite strong enthusiasm among certain groups, the overall percentage of New Zealanders who regularly consume raw or on-farm pasteurised milk remains modest. According to the same MPI survey, about 6% of the population drinks raw milk regularly, though 58% have tried it at least once (AUSRawMilk.org, 2019). This suggests a mix of curiosity and limited ongoing adoption.

Demographically, raw milk buyers are often health-conscious families, individuals aligned with organic or natural lifestyles, and “foodies” interested in artisanal or traditional products. Pasteurised on-farm milk tends to appeal to a slightly broader base, including urban consumers seeking sustainable packaging and convenient home delivery. For instance, the rise of services like Canterbury’s Choice, which delivers pasteurised A2 milk in glass bottles, has been popular among environmentally conscious customers in Christchurch (RNZ, 2023).

Sustainability and Ethical Values

Sustainability is a strong secondary motivator. Consumers appreciate reusable packaging (like glass bottles or stainless-steel kegs), which significantly reduces plastic waste. This eco-conscious packaging has helped farm-branded milk compete in institutional tenders, such as

the University of Canterbury's switch from Synlait to Canterbury's Choice in part due to its environmental credentials (RNZ, 2023).

Ethical farming practices also resonate with buyers. Initiatives like Happy Cow Milk have gained attention for their commitment to animal welfare, such as keeping calves with cows for longer, and for promoting regenerative or organic farming approaches (Rural News Group, 2021). These values are often highlighted in marketing and help justify premium pricing.

Summary

The demand for on-farm milk sales is underpinned by a combination of health perceptions, taste preferences, sustainability ethics, and a desire for local, transparent food systems. While overall consumer uptake remains niche, those who do participate often become loyal, repeat customers. This enthusiasm makes on-farm milk ventures economically viable despite regulatory and operational challenges. The next section will explore the financial and environmental implications of such ventures for farmers.

3.4 Economic and Environmental Considerations

On-farm milk sales present both opportunities and challenges from an economic and environmental perspective. This section outlines how direct-to-consumer milk ventures can diversify income, increase profitability, and enhance farm sustainability—while also requiring considerable investment, regulatory compliance, and operational complexity.

Income Diversification and Economic Viability

One of the most compelling motivations for farmers to sell milk directly is the potential for higher returns per litre. Instead of receiving the fluctuating farmgate milk price, often less than $1 per litre, farmers can retail their own milk for $2–$4 per litre, depending on the product and market (Humpbridge Milk, 2023). Even after accounting for higher costs, this price differential can make small-scale on-farm milk sales a viable supplementary income source.

The appeal is especially strong during periods of low global dairy payouts. When milk prices drop, direct sales can provide a financial buffer. For instance, raw milk vending machines often charge around $3.50/L, and pasteurised premium brands like Canterbury's Choice retail glass-bottled milk for over $3/L (RNZ, 2023).

However, the profit margin is quickly eroded by costs. Compliance with food safety regulations, including registration, product testing, audits, and risk management plan development, can account for 20% or more of raw milk revenue (MPI, 2020). Equipment (pasteurisers, bottling lines, cool storage), labour (bottling, delivery, customer service), and packaging (bottles and cleaning) add further overhead.

For example, Alex Irvine of Canterbury's Choice initially processed, bottled, washed glassware, and drove deliveries himself. As the business grew, he had to employ staff and develop a logistics operation, effectively turning the enterprise into a small dairy company (RNZ, 2023). Not all farmers have the capacity or appetite for this scale of entrepreneurship.**Scale, Scope, and Branding**

Most on-farm milk sales operations remain small in scale. They often divert a portion of their milk to the on-farm business while the rest is sent to conventional processors. In rare cases, such as Canterbury's Choice delivering over 2,000 bottles per day, the volume approaches that of a moderate-sized standalone dairy (RNZ, 2023).

The ability to scale depends on local demand, distribution capacity, and the farmer's willingness to manage complex operations. Many find a sweet spot by remaining small, operating one vending machine or covering a few delivery routes, which allows them to retain quality control and customer engagement while covering fixed costs.

To be financially viable, on-farm milk must command a premium price. This is achieved through branding and differentiation: A2 milk, organic certification, reusable glass packaging, or "calf-friendly" practices can all justify higher pricing. Narrative marketing, e.g., "milk from Jersey cows on our Canterbury family farm", helps forge emotional connections that translate into consumer loyalty and pricing power.

Financial Risk and Management

Despite its rewards, direct milk sales carry significant risks. Raw milk, with a shelf life of 24–48 hours, must be kept refrigerated and sold quickly or discarded, while refrigerated pasteurised milk also has limited storage time. Managing this supply-demand balance is a constant operational challenge.

Disruptions such as vehicle breakdowns, equipment failure, or food safety scares can lead to immediate income loss. The 2020 Campylobacter outbreak linked to one farm, for example, forced a complete business model overhaul and led to a $27,500 court fine (RNZ, 2021).

Furthermore, farmers exiting or partially exiting a supply agreement with Fonterra or another cooperative may forgo economies of scale or risk contract penalties. While legal frameworks like the Dairy Industry Restructuring Act support partial exits, shifting volumes must be carefully managed to avoid income disruption (NZ Herald, 2021).

Environmental Benefits: Transport and Packaging

From an environmental perspective, on-farm milk sales often reduce food miles and packaging waste. Milk consumed within the local area does not require long-haul trucking, refrigeration in transit, or supermarket distribution chains. Home delivery routes and reusable milk dispensers can replicate the efficiency of historical milk runs, especially when delivery is optimised geographically (Rural News Group, 2021).

Reusable glass bottles are a core feature of many on-farm models. For example, Canterbury's Choice and Happy Cow Milk both use glass bottles and stainless-steel kegs and Otago Fresh five litre plastic pails, significantly reducing single-use plastic consumption. Happy Cow also experimented with bulk milk vending systems in cafés, further minimising packaging waste (Rural News Group, 2021).

The energy and water use associated with bottle sterilisation is not negligible, and somestudies show that reuse becomes environmentally superior to single-use plastic after just a few wash cycles, assuming consistent return rates (Good News Network, 2022). Many

customers are enthusiastic participants in this return system, often incentivised through deposit refunds or environmental messaging.

Sustainable Farming Practices

Beyond packaging, some farms use on-farm milk ventures to support a shift toward sustainable or regenerative agriculture. Hohepa in Hawke's Bay, for instance, operates a biodynamic system with 50 cows and produces bottled milk and cheeses for local sale. Their low-impact practices result in minimal nitrate runoff and a smaller carbon footprint (Dairy Exporter, 2021).

Similarly, Happy Cow Milk's mobile milking system was designed to reduce paddock damage and enable more even manure distribution. Although this innovation faced regulatory and eventually financial challenges, it shows the potential for small-scale dairy businesses to experiment with more environmentally friendly practices (Milking on the Moove, 2018).

However, the environmental upside is not guaranteed. If customers drive long distances just to collect milk, or if farms retain high stocking rates while layering direct sales on top, the environmental benefits may be offset. That said, most successful ventures integrate sustainable practices as a marketing and values proposition, ensuring that environmental stewardship is both a mission and a commercial advantage.

Summary

On-farm milk sales offer clear potential to diversify income and foster greater resilience to global market volatility. When well-managed, they can increase profitability, reduce environmental impact, and support more sustainable farming models. However, they also demand high standards of compliance, infrastructure, and business management. For most New Zealand dairy farms, this diversification remains a niche opportunity, but one with growing relevance as consumer expectations evolve and demand for local, transparent, and ethical food continues to rise.' Many farmers enter the on-farm milk sales space with the expectation that it will be a relatively simple way to add value to their existing dairy operation. However, the time demands are frequently underestimated. Compliance alone, managing testing, audits, and detailed record-keeping, can consume several hours each week. Add to this the logistics of bottling, cleaning, delivering product, customer communication, and marketing, and what begins as a diversification project quickly becomes a second full-time job. Several interviewees spoke candidly about burnout, particularly in the early stages when the business has not yet scaled enough to justify hiring staff. The result is a workload that often falls entirely on the farmer and their immediate family, making long-term sustainability challenging unless deliberate systems or support are put in place.

3.5 Case Studies of On-Farm Diversification

To understand how on-farm milk sales function in real-world settings, it is helpful to examine the experiences of New Zealand dairy farmers who have implemented such systems. The following case studies explore a variety of approaches, raw versus pasteurised, small-scale versus scaled-up operations, and traditional versus innovative models. Each example

highlights unique challenges, benefits, and adaptations that illustrate the viability and complexity of dairy diversification.

Case Study 1: Village Milk – Golden Bay

Established in 2011 by Mark and Jenny Houston, Village Milk was among the first farms in New Zealand to install a European-style raw milk vending machine. Located in Golden Bay, the farm sold unpasteurised milk directly to customers 24/7 using a refrigerated self-service dispenser (ABC News, 2015). Customers could bring their own containers or buy reusable bottles and fill them with fresh, whole milk on-site.

From the outset, the Houstons focused heavily on hygiene and food safety, conducting regular testing and replacing any milk more than 24 hours old. They reported no health incidents in their first four years of operation (ABC News, 2015). Their model proved popular, with up to 300 litres sold daily during peak times.

Following the 2016 raw milk regulations, Village Milk registered under the Ministry for Primary Industries' (MPI) Raw Milk for Sale to Consumers Regulations and continued operating under the new legal framework (Consumer NZ, 2016). Mark Houston also chaired the Raw Milk Producers Association and advocated for fair regulatory standards for small producers (ABC News, 2015).

The Village Milk concept became a loose franchise, with the Houstons advising other farms on how to replicate the model. Their success demonstrates that small-scale raw milk vending can be both safe and financially viable when executed with diligence and community trust.

Case Study 2: Lindsay Farm – Hawke's Bay

Lindsay Farm presents a more controversial example. The organic farm, once New Zealand's largest raw milk supplier, served an estimated 1,700 customers across the North Island using a network of refrigerated depots (RNZ, 2020). After the 2016 regulations banned third-party depots, the farm attempted to continue operating by creating a "cow share" ownership scheme, claiming that customers were legally entitled to milk from their own animals.

This workaround was rejected by MPI. Despite multiple warnings, the farm continued distributing milk outside the legal framework. In 2020, a Campylobacter outbreak linked to its raw milk caused several illnesses, forcing the farm to formally register and comply with regulations (RNZ, 2021). The director was later fined $27,500 for illegal sales.

While the business has continued operating under the regulated system, Lindsay Farm's experience highlights the risks of non-compliance and the limits of legal grey areas. It also underscores the strong demand for raw milk and the need for regulatory frameworks that balance consumer health safety with commercial practicality.

Case Study 3: Canterbury's Choice – Springston, Canterbury

Canterbury's Choice, founded by Alex Irvine in 2019, is a leading example of a successful pasteurised on-farm milk enterprise. Starting with A2 milk from his family herd, Irvine built a processing facility on the farm and began delivering bottled milk to Christchurch homes and businesses in reusable glass bottles (RNZ, 2023).

The operation quickly expanded. By 2023, it was delivering over 2,000 bottles per day and had won a contract to supply the University of Canterbury, outbidding major processors like Synlait. Sustainability was a key selling point: milk was delivered in steel kegs or glass bottles, cutting down on single-use packaging (RNZ, 2023).

Irvine managed all aspects of the business in its early days, pasteurising, bottling, cleaning, and driving. As demand increased, he hired staff and scaled up logistics, effectively creating a boutique dairy company. His story shows that with effective branding, compliance, and commitment, an on-farm milk operation can succeed even in urban markets dominated by large processors.

Case Study 4: Happy Cow Milk – Canterbury and Waikato

Happy Cow Milk, founded by Glen Herud, represents one of the most innovative dairy diversification models in New Zealand. The company's initial concept, "Milk on the Moove", involved a mobile trailer that could milk cows, pasteurise the milk, and bottle it on the paddock (Milking on the Moove, 2018).

This mobile approach won awards for sustainability and cow welfare (e.g., cows stayed with their calves longer, and paddock pugging was reduced), but proved costly and challenging to operate under MPI regulations. By 2018, the original model was discontinued due to high compliance and labour costs (Rural News Group, 2021).

Undeterred, Herud pivoted. Happy Cow re-emerged with a "factory in a box" concept: small pasteurisation and bottling units installed on existing farms, with milk delivered to urban pickup points. Customers order via an app, and milk is collected from designated fridges in cafés or health food stores (Rural News Group, 2021).

This new model has shown promise by reducing overhead for farmers, using digital logistics, and aligning with sustainability goals. If successful, it may become a replicable system for small farms wishing to enter the milk processing business with less capital investment.

Case Study 5: Hohepa Hawke's Bay – Community and Biodynamic Farming

Hohepa is a community-run organic farm in Hawke's Bay that integrates dairy production with social outcomes. It milks around 50 cows using biodynamic principles and processes 700–800 litres of milk weekly into bottled milk, cheese, and yogurt (Dairy Exporter, 2021).

Hohepa supplies its own schools and residential homes as well as nearby customers using stainless steel milk cans and glass bottles. The operation also provides meaningful employment for people with intellectual disabilities, aligning food production with social and ethical values.

Although small in scale, Hohepa demonstrates how on-farm milk sales can support low-impact farming and community building while meeting growing consumer demand for local, ethical food.

Summary

These case studies reflect the diversity of models within New Zealand's on-farm milk sales landscape. From regulatory cautionary tales like Lindsay Farm to innovative tech-based platforms like Happy Cow, each example highlights different routes to market and degrees of success. Common themes include the importance of compliance, hygiene, consumer trust, and branding. While not every farm will follow the same path, these pioneers show that with careful planning, farmer-direct milk ventures can provide meaningful alternatives to traditional dairy models.

4. Key Themes

4.1 Market Opportunity and Consumer Insights

On-farm milk sales in New Zealand are driven by a combination of consumer demand for local, transparent food systems and the economic imperative for farmers to diversify in the face of global dairy market volatility. Existing literature highlights the resurgence of consumer interest in "real food" and the move away from industrial-scale, processed goods (AUSRawMilk.org, 2019; RNZ, 2023). This aligns with international consumer movements in Europe and North America, where small-scale dairies have similarly benefited from the growing demand for artisanal and traceable food products (International Dairy Journal, 2022).

The interviews conducted as part of this research provide rich qualitative data on why different consumer segments are drawn to on-farm milk sales. Health-conscious families are attracted by the perceived nutritional benefits of raw milk, including claims around probiotics and gut health (AUSRawMilk.org, 2019), even though mainstream scientific consensus disputes any added health benefits over pasteurised milk (Prime Minister's Chief Science Advisor, 2019). Older consumers express a sense of nostalgia for the milk delivery of earlier decades, seeing farm-direct milk as a link to a simpler past (Volcanic Creamery, 2025). Cafés and boutique food businesses have also emerged as significant buyers, reflecting the broader trend of premiumisation in food services (Canterbury's Choice, 2023).

Importantly, market segmentation emerges as a key insight: raw milk appeals to a smaller but deeply loyal audience, while pasteurised milk has a much wider market scope, particularly in urban centres. According to data from MPI and the interviews, pasteurised milk producers can supply both households and commercial clients like cafés and restaurants, helping them build more stable sales volumes (Volcanic Creamery, 2025). This segmentation underscores that farmers entering the on-farm milk market must tailor their offerings to distinct consumer groups.

In addition, sustainability and localism are strong selling points. Farmers who use reusable glass bottles or who highlight animal welfare practices find resonance with consumers motivated by environmental and ethical values (Hohepa, 2021; RNZ, 2023). This reflects a broader shift in consumer expectations across all food sectors, where values-based consumption is driving loyalty and price tolerance (NZ Herald, 2023). The interviews also show that while these "ethical" drivers are secondary to taste and health for some buyers, they provide a crucial layer of differentiation that allows farmers to justify premium prices.

A notable insight from the interviews is the extent to which customer trust underpins this niche market. For instance, one farmer highlighted how customers would drive significant

distances to access his milk, with some forming group buying arrangements to reduce travel costs (Village Milk, 2025). This level of commitment is rare in conventional dairy markets and suggests that on-farm milk sales can create unique forms of community around food sourcing (RNZ, 2023). These community relationships are vital to offsetting the challenges of high regulatory costs and operational complexity, as word-of-mouth marketing and personal relationships can reduce the need for expensive advertising.

Globally, similar patterns have been observed in countries like the UK, Italy, and the US, where small-scale, direct-to-consumer milk sales have grown as consumers seek fresher, minimally processed dairy with traceable origins (Dairy Reporter, 2022). However, New Zealand's market size and geographic dispersion mean that urban areas with high concentrations of discerning consumers, like Christchurch or Auckland, are more viable markets for pasteurised on-farm milk than remote rural areas.

This nuanced understanding of market opportunity is critical for farmers considering diversification. The customer interviews and literature collectively highlight that success depends on identifying the right consumer segment, building trust through transparency and consistent quality, and embracing values-based marketing strategies that tap into consumer concerns about health, environment, and community.

4.2 Operational and Infrastructure Requirements

Establishing on-farm milk sales in New Zealand is a complex undertaking that demands significant investment in infrastructure, equipment, and human resources. This section expands on the insights from the literature and interviews, detailing the core operational requirements and practical considerations that farmers must address when transitioning from conventional supply contracts to direct-to-consumer milk sales.

Physical Infrastructure and Equipment
The first major hurdle for on-farm milk sales is the physical setup of the processing facility. Whether raw or pasteurised, these facilities must meet strict MPI standards for hygiene and food safety. For pasteurised milk, this typically involves constructing a dedicated processing room or factory separate from the main milking shed. One farmer described how their initial vision of a simple bottling operation evolved into a 150-square-metre factory with pasteurisation tanks, bottling lines, cleaning systems, and dedicated cold storage areas (Volcanic Creamery, 2025). This transformation required significant capital investment and careful planning.

Similarly, another farmer highlighted that even with imported equipment ready to go within 10 weeks, regulatory and compliance processes delayed operational start by almost two years (Bella Vacca, 2025). This illustrates that physical infrastructure alone is not enough, navigating building consents, council regulations, and MPI's expectations are equally important and time-consuming.

Technological and Operational Systems
Pasteurisation equipment itself is a major investment. Farmers must choose between batch pasteurisers (suitable for smaller volumes) and continuous flow systems (more expensive but efficient for larger production). Bottling lines must comply with MPI's codes for dairy premises, and cleaning protocols require sophisticated systems to ensure no bacterial contamination—particularly because dairy products are perishable and high-risk (MPI, 2016).

In the case of raw milk operations like Village Milk and Henderson Dairy, although pasteurisation is not required, the need for rapid cooling (below six degrees within two hours) and ongoing pathogen testing places similar demands on equipment and workflow (Village Milk, 2025; Henderson Dairy, 2025). This reinforces the point that while pasteurised milk has more freedom in distribution channels, both models require careful investment in hygiene and cold chain integrity.

Labour and Training

Transitioning from conventional supply to direct milk sales also demands a new skill set for farmers. Interviews consistently reveal that day-to-day operations extend far beyond milking and animal care. Tasks like bottling, cleaning, order management, logistics, and customer communication become critical. Some farmers initially managed all aspects of the operation themselves, but as demand grew, they had to hire staff and develop formal training systems (RNZ, 2023).

The day-to-day commitment also requires a mindset shift. One farmer noted that on-farm milk sales are not a "side hustle", they are a second full-time job requiring as much attention to the factory as to the cows (Volcanic Creamery, 2025). Staff training is essential for maintaining food safety standards, with many farmers implementing apps like Safe Food Pro to manage daily records and logs in line with MPI's verification requirements (Volcanic Creamery, 2025).

Compliance as an Operational Priority

Interviews revealed that many farmers underestimated the complexity of compliance work when they started. One farmer described how the transition from RMP (shown in figure below), to RCS added new layers of record-keeping and verification that were challenging even with their years of experience (Village Milk, 2025). While another farmer faced similar frustrations, noting the need to work with multiple labs to satisfy all MPI-mandated tests, sometimes because no single lab could handle all tests at once (Bella Vacca, 2025)

Table 1 - This sample logbook page is designed for use in raw milk operations under a Risk Management Programme (RMP). It includes space to record daily microbiological testing data, temperature checks, and any corrective actions taken.

Date	Time of Milking	Milk Temp (°C)	Test Type (e.g., E. coli, Listeria)	Test Result	Corrective Action Taken (if any)
13/06/2025	6:00 AM	4.3	E. coli	ND (Not Detected)	None
13/06/2025	6:00 AM	4.3	Listeria	ND (Not Detected)	None

These examples demonstrate that regulatory compliance is not just a licensing issue—it shapes the entire daily operation of on-farm milk businesses. The need for testing,

verification, and record-keeping adds significant labour hours and operational costs that must be factored into any business model.

Supply Chain and Logistics
Distribution and delivery also present unique challenges. Unlike conventional Fonterra supply contracts, where milk is collected from the farm gate, on-farm milk sales require farmers to manage transport to households, cafés, and retail outlets. For instance, the delivery runs of one farm supplier into urban Christchurch are carefully mapped to maintain milk freshness and maximise delivery efficiency (Canterbury's Choice, 2023).

Some small-scale operations that serve rural and suburban delivery areas, must balance transport costs with their smaller volumes, especially in the face of high compliance costs (Otago Fresh Milk, 2025). This creates a tension between the hyper-local ethos of farm-gate sales and the realities of reaching enough customers to cover costs.

Integration with Broader Farm Operations
Finally, the interviews highlighted that successful integration of on-farm milk sales with broader farm operations requires careful planning. Farmers must decide how much of their herd's production to dedicate to direct sales, while still meeting cooperative supply commitments (often seen as a backup revenue stream). This balance affects herd management, milking schedules, and feed budgeting.

For example, some farms offer both conventional supply and direct sales, using separate herds to manage risk and maximise revenue (Lindsay Farm, 2025). Another farms approach, focusing on 20 of their 200 cows for raw milk sales, demonstrates how careful selection of animals and volumes can optimise quality and profitability (Real Milk Timaru, 2025).

Summary
In summary, the operational and infrastructure requirements for on-farm milk sales in New Zealand are extensive, demanding both financial and managerial resources. Farmers must navigate not only the practical challenges of building compliant facilities and managing logistics, but also the significant regulatory workload that defines daily operations. Success in this space requires more than good milk, it requires robust systems, investment, and a willingness to embrace the business realities of a modern micro-dairy operation.

4.3 Legal and Compliance Considerations

Legal and regulatory compliance is arguably the single most significant challenge for farmers diversifying into on-farm milk sales in New Zealand. This section expands on the key themes identified in the interviews and literature review, incorporating global context, historical policy evolution, and specific farmer experiences to build a complete picture of the regulatory environment.

Regulatory Frameworks: An Overview
New Zealand's approach to dairy product safety and hygiene is based on a two-tier framework:

- **Raw milk** is governed by the Raw Milk for Sale to Consumers Regulations 2015 and the Animal Products Notice: Raw Milk for Sale to Consumers Regulated Control Scheme 2022.
- **Pasteurised milk** is regulated under the Animal Products Act 1999 and requires a Risk Management Programme (RMP) based on the HACCP principles of hazard analysis and control.

These frameworks were developed to align New Zealand's domestic dairy sector with international best practices, ensuring that both domestic and export markets are supplied with safe, high-quality products (MPI, 2016). However, the interviews reveal a consistent theme: while these frameworks ensure food safety, they are often applied to on-farm milk sales in ways that do not account for the smaller scale and unique operational realities of these ventures.

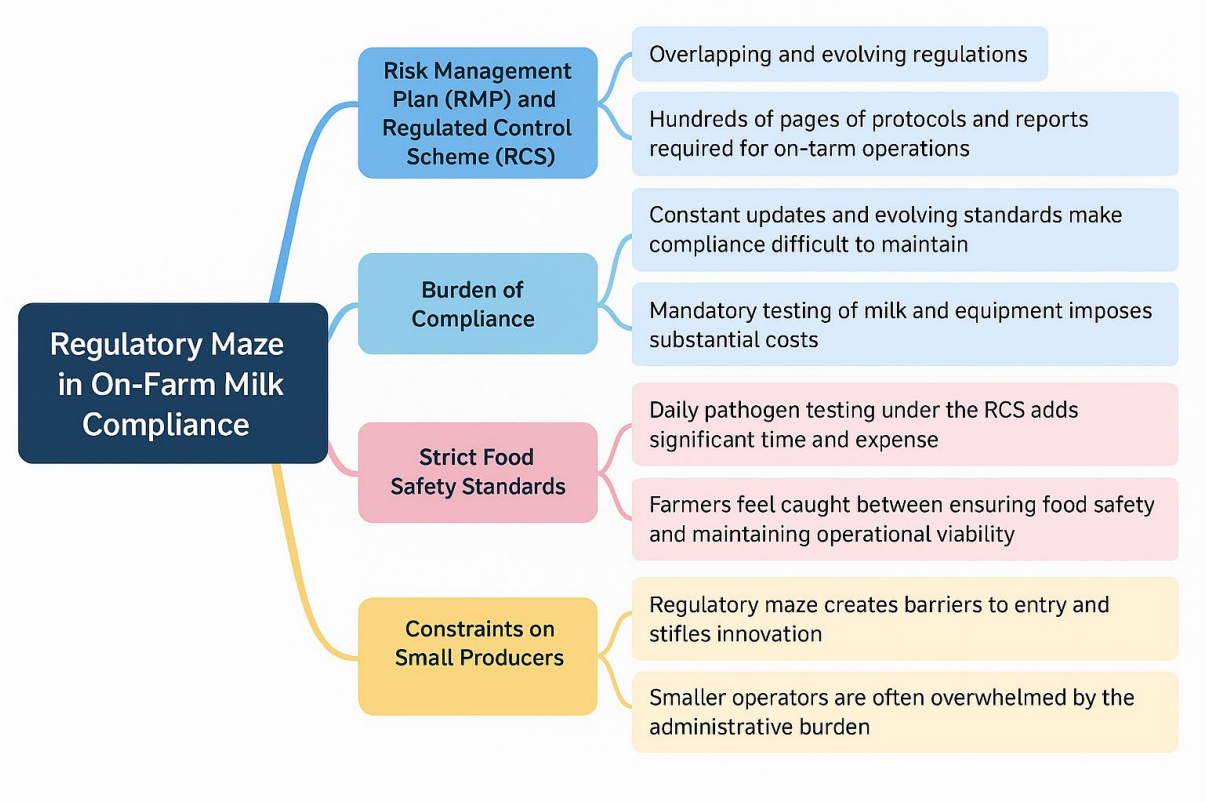
Raw Milk: High Risk, High Compliance Burden

Raw milk is classified as a high-risk product due to its potential to carry pathogens like Campylobacter, Salmonella, and Listeria (Prime Minister's Chief Science Advisor, 2019). Under the current regime, farmers selling raw milk directly to consumers must:

- Register with MPI under the Regulated Control Scheme (RCS).
- Undergo six-monthly farm dairy assessments and annual verification audits.
- Conduct regular pathogen testing at accredited laboratories, with costs that often exceed $10,000–$16,000 annually (MPI, 2025; Bella Vacca, 2025).
- Adhere to strict sales channels: farmgate or direct home delivery only (no retail or restaurant sales).
- Use precise labelling that includes health warnings and farm details (Animal Products Notice, 2022)

Figure 1 **The Regulatory Maze Facing On-Farm Milk Producers in New Zealand**

This diagram illustrates the layered and complex regulatory challenges encountered by small-scale dairy farmers undertaking raw or pasteurised milk sales direct to consumers. Through thematic analysis of interviews, three major areas of difficulty emerged: the burden of compliance under the Risk Management Plan (RMP) and Regulated Control Scheme (RCS); the inflexible and resource-intensive demands of strict food safety standards; and the disproportionate impact these systems have on small producers. The combined effect creates significant time, cost, and administrative pressure—ultimately acting as a barrier to entry, discouraging innovation, and contributing to burnout among otherwise capable and motivated operators.



The **mind map** (Figure 1) illustrates how these rules create a maze of paperwork and testing that can overwhelm smaller operators. Some farmers described feeling trapped between food safety imperatives and the financial and operational burden of compliance, with the RCS significantly increasing administrative demands over the earlier Risk Management Plan (RMP) framework.

Pasteurised Milk: Flexible but Still Demanding

Pasteurised milk operations are regulated through the Animal Products Act and the Food Standards Code (Food Standards Australia New Zealand, 2023). Unlike raw milk, pasteurised milk can be sold to retail outlets, restaurants, and institutions, significantly expanding market opportunities. However, it still requires:

- A registered RMP covering every stage of production, from milking to bottling.
- Full hazard analysis and documented control measures (HACCP-based).
- MPI verification and audits to ensure adherence to sanitation, pasteurisation, and record-keeping standards (MPI, 2016).

Some Farmers noted that while pasteurisation opens broader markets, the compliance workload remains substantial (Volcanic Creamery, 2025; Bella Vacca, 2025). Hamish described the need to operate essentially as a mini-dairy company, with paperwork, staff training, and inspections consuming as much time as actual farming.

Inconsistent Enforcement and Regulatory Interpretation
One of the most striking findings from the interviews is the inconsistency in how these regulations are enforced and interpreted. Some farmers reported supportive relationships with MPI verifiers who helped them find practical, cost-effective ways to meet food safety goals. Others described rigid, punitive approaches that left no room for flexibility or innovation (Lindsay Farm, 2025; Village Milk, 2025).

For instance, one farmer recounted efforts to place milk dispensers in town to expand access. Despite proven safety and hygiene practices, these efforts were consistently blocked by local councils and MPI, highlighting how even innovative, community-focused solutions can be stymied by inflexible interpretations of the rules (Village Milk, 2025).

Global Comparisons and Historical Context
Internationally, many countries face similar tensions between food safety and farm-scale innovation. In Europe, Italy's long tradition of raw milk vending machines has been supported by local authorities and adapted to modern safety practices (European Dairy Association, 2022). In the UK, pasteurised on-farm milk sales have seen modest growth, though still with significant regulatory oversight.

New Zealand's regulatory environment evolved from a time when most milk was sold locally by small processors to today's focus on export markets. Interviews with farmers like those at Village Milk highlight the mismatch between modern rules—designed for large export processors—and the needs of small farm-gate businesses.

Costs and Practical Implications
Interviews repeatedly pointed to the high costs of testing and verification. For example, Gavin at Bella Vacca faced annual testing costs of $16,000, working with multiple labs because no single facility could meet all MPI requirements (Bella Vacca, 2025). For small operators, these costs can consume 20–30% of gross revenue, creating an ongoing financial strain that can discourage market entry.

Farmers also described challenges with integrating MPI's record-keeping demands into daily operations. The Safe Food Pro app is one tool adopted by some farms to streamline this process, but the constant need for updates and logs remains a source of stress and complexity (Volcanic Creamery, 2025).

Calls for Reform: A Risk-Based Approach
A consistent theme across the interviews is the call for a more risk-based approach to compliance. Farmers like Hamish from Volcanic Creamery and Shelli from Otago Fresh Milk argued that verifiers should be allowed more discretion to approve practical, farm-specific solutions that maintain safety while reducing costs (Volcanic Creamery, 2025; Otago Fresh Milk, 2025). Such flexibility could include differentiated testing frequencies based on past performance or streamlined record-keeping for small volumes.

Summary
New Zealand's regulatory frameworks for on-farm milk sales ensure public health but create major barriers for small-scale processors. Farmers must navigate a system that treats them like large-scale processors, regardless of their lower volumes and reduced risk profiles. While some farmers find ways to thrive within this system, many others find the burden too high.

The next section will explore how these legal and compliance realities impact financial viability and the long-term sustainability of on-farm milk sales.

4.4 Financial Viability and Risk Assessment

Financial viability is a central consideration for any farmer contemplating a transition from conventional dairy supply to on-farm milk sales. While the price premiums for direct-to-consumer milk can be substantial, often 2-3 times the conventional farmgate payout, the interviews and literature review reveal a complex picture of profitability, risk, and business sustainability.

Potential for Higher Revenue Per Litre
One of the main appeals of on-farm milk sales is the significant price premium. While conventional farmgate payouts typically hover around $7-$9 per kilogram of milk solids (Fonterra, 2024), direct-to-consumer milk can fetch $2-$4 per litre or more (RNZ, 2023; Canterbury's Choice, 2023). Lindsay Farm, for example, sells raw milk at $6.50 per 2-litre bottle—approximately $27 per kilogram of milk solids, triple the conventional return (Lindsay Farm, 2025). Interviews with farmers like Andrea from Real Milk Timaru and others confirm that these higher prices can transform a small herd's output into a sustainable, niche-focused enterprise.

This price premium is not guaranteed profit, however. Farmers must invest in bottling equipment, pasteurisers (if applicable), delivery vehicles, and staff. The upfront capital cost can range from tens of thousands to over a hundred thousand dollars, depending on scale and processing method (Bella Vacca, 2025; Volcanic Creamery, 2025). As Hamish from Volcanic Creamery noted, even modest setups require significant upfront cash or debt financing, which can be daunting for smaller farms.

Compliance Costs: The Major Financial Hurdle
The compliance burden is consistently identified as the greatest financial challenge. For raw milk producers, annual testing costs alone can exceed $10,000-$16,000, eating up to 20-30% of gross revenue for smaller producers (MPI, 2025; Otago Fresh Milk, 2025). Pasteurised milk businesses also face costs associated with verification audits, RMP development, and compliance software—though they benefit from greater market access.

The interviews highlighted how these compliance costs weigh heavily on small businesses. Gavin from Bella Vacca described how working with three different labs to meet testing requirements added thousands of dollars in costs and hours of additional paperwork (Bella Vacca, 2025). These expenses compound quickly, especially for smaller producers with limited cash flow.

Labour and Operational Costs
On-farm milk sales operations are labour-intensive. Farmers must manage not just milking and herd health, but also bottling, cleaning, delivery, marketing, and customer service (Volcanic Creamery, 2025; Canterbury's Choice, 2023). Many interviewees noted that direct sales operations quickly become a "second full-time job," requiring as much management as conventional farm operations.

Labour costs vary depending on whether family members participate or if paid staff are needed. While some small producers rely on family labour to contain costs (Real Milk

Timaru, 2025), others like Canterbury's Choice have hired staff to handle bottling and delivery as volumes grow. Staff training and turnover add further complexity and costs, especially given MPI's strict verification standards.

Managing Supply Chain and Waste Risks
Unlike Fonterra supply contracts, which guarantee collection and payment regardless of weather or market demand, on-farm milk sales expose farmers to the full volatility of local demand. Interviews consistently showed that small producers must balance milk production with unpredictable customer demand to avoid waste—especially for raw milk, which has a shelf life of only 24 to 48 hours (Otago Fresh Milk, 2025).

For pasteurised milk, shelf life is longer (up to 10–14 days), but the need for precise forecasting and cold storage remains critical (Canterbury's Choice, 2023). Farmers noted that any delivery disruption—such as a vehicle breakdown or illness—can lead to product loss and financial hits.

Financial Resilience and Diversification Benefits
Despite these risks, many farmers view direct-to-consumer milk sales as a key tool for improving financial resilience. The ability to sell directly allows them to escape the global dairy payout cycle, which can be volatile and driven by external market forces (MPI, 2023). Farmers like those at Hohepa and Village Milk described how even small-scale direct sales help smooth cash flow during payout downturns, providing a buffer against market uncertainty (Hohepa, 2021; Village Milk, 2025).

This aligns with global trends: European studies have found that direct sales of farm produce, including milk, can offer greater price stability and independence from processor-dominated supply chains (European Dairy Association, 2022). However, the ability to access these benefits depends on overcoming regulatory and operational hurdles.

Environmental and Social Considerations in Financial Sustainability
For some farms, environmental and ethical values form part of the financial strategy. Canterbury's Choice and Hohepa, for instance, use reusable glass bottles and regenerative farm practices as part of their brand, allowing them to charge a premium and reduce waste disposal costs (RNZ, 2023; Dairy Exporter, 2021). Interviews suggest that customers arwilling to pay extra for milk that aligns with their values around sustainability, creating a niche but financially rewarding market segment.

Summary and Financial Trade-offs
The financial viability of on-farm milk sales is not universal, it depends on multiple factors: the size of the operation, the regulatory framework, the ability to build customer trust, and the skill to juggle farming with processing and marketing. Farmers like Hamish and Gavin emphasize that while the margins per litre can be significantly higher than conventional sales, the overall profitability is determined by the balance of compliance costs, labour, and market demand.

Risk management is therefore essential. Farmers often retain supply contracts with Fonterra or similar processors as a backup for surplus milk or during periods of lower direct demand (Bella Vacca, 2025; Lindsay Farm, 2025). This dual-track approach allows them to manage risk while exploring the premium opportunities of direct sales.

In summary, while on-farm milk sales offer real financial potential, particularly for farmers motivated by values beyond pure economics, they also require substantial investment, regulatory navigation, and operational skill. The following section will synthesise these financial considerations with broader market and regulatory themes, building towards practical conclusions and recommendations for farmers and policymakers alike.

5. Key Findings

The research revealed a complex but compelling picture of the current and potential state of on-farm milk sales in New Zealand. While the literature provided a solid foundation, it was the producer interviews and expert commentary that painted a vivid, real-world picture of the opportunities, frustrations, and innovations shaping this niche sector. This chapter distils those insights into three key areas: findings from the interviews and informal surveys, recurring themes across case studies, and specific insights from expert stakeholders in the field.

5.1 Summary of Survey Results

This study employed a consumer survey with quantitative metrics, but used structured and semi-structured interviews with five dairy operators and two industry experts. These

interviews effectively functioned as qualitative surveys, revealing consistent patterns across different business models, farm sizes, and regulatory pathways.

Interview Themes

Customer Behaviour:

- All participants reported strong customer loyalty, with buyers often returning weekly and bringing others through word-of-mouth.
- Geographical reach extended beyond expectations: customers regularly travelled 30–90 minutes one-way to access raw or lightly processed milk.
- Perceived benefits of raw milk consumption were cited frequently by customers—ranging from better digestion and eczema improvements to emotional connections with animal-friendly farming practices.

Regulatory Experience:

- All producers identified compliance and legal setup as the most time-consuming and expensive component of their diversification process.
- While some described MPI personnel as helpful and responsive, others described inconsistent interpretations and a lack of clarity around regulatory expectations, especially for infrastructure design and town-based distribution.

Infrastructure Investment:

- Every producer reported significant delays due to lack of suitable equipment, especially bottling systems and pasteurisers designed for small-scale operations.
- Three of five participants had to custom-build or extensively retrofit equipment, with capital outlay exceeding initial expectations in most cases.

Marketing and Customer Relations:

- None of the producers relied solely on traditional advertising. Instead, they leveraged Facebook groups, farm signs, and community events.
- All operators noted that personal engagement and education were essential, especially around raw milk safety, storage, and use-by dates.
- Refillable glass bottle systems were used widely, but producers acknowledged the labour and customer communication burden required to maintain them.

To better understand consumer behaviour and preferences related to on-farm milk sales, a survey was conducted targeting individuals who purchase raw and/or pasteurised milk directly from farms—either through on-farm dispensers or home delivery services. The survey explored key factors such as household demographics, purchasing frequency, volume of milk consumed, motivations for choosing direct supply, and attitudes toward food safety, sustainability, and reusable packaging.

Table 1 below summarises the most common, second most common, and third most common responses for each survey question, providing a clear overview of prevailing trends and consumer sentiment

Table 1

Question	Most Common Response	Second Most Common Response	Third Most Common Response
1. Household Type	Family with children (40%)	Couple (30%)	Single/Multi-generational/Other (30%)
2. Milk Type Purchased	Raw milk (60%)	Pasteurized milk (25%)	Both (15%)
3. Purchase Method	On-farm dispenser (55%)	Home delivery (30%)	Drop point (15%)
4. Purchase Frequency	Weekly (45%)	More than once a week (20%)	Fortnightly/Monthly/Occasionally (35%)
5. Weekly Milk Volume	2–5 litres (40%)	5–10 litres (35%)	More than 10 litres (15%)
6. Motivations for Buying Direct (Top 3)	Better taste (80%), Support local farmers (75%), Health benefits (65%)	Traceability (60%), Reduced packaging (50%), Environmental concern (55%)	Animal welfare (45%), Cost (20%)
7. Satisfaction Level	Very satisfied (80%)	Satisfied (10%)	Neutral/Dissatisfied (10%)
8. Preference for Reusable Packaging	Yes (70%)	No preference (20%)	No (10%)
9. Willingness to Pay More for Sustainable Practices	Yes (65%)	Maybe (25%)	No (10%)
10. Confidence in Milk Safety	Very confident (80%)	Somewhat confident (5%)	Neutral/Not very confident (15%)
11. Interest in Transparency (e.g., Test Results)	Yes (70%)	Maybe (20%)	No (10%)

5.2 Emerging Themes from Interviews and Case Studies

In analysing the interviews and case examples, several thematic patterns emerged. These point to both the uniqueness of each business and the common structural realities faced by all operators.

A. Consumers Seek More Than Milk, They're Buying Values

On-farm milk customers consistently prioritised values over price. While the product was often more expensive than supermarket milk, this was not a deterrent. Instead, customers were driven by:

- **Trust in the farmer** and confidence in food handling practices.
- **Desire to support local agriculture** and reduce supply chain length.

- **Perceptions of health benefits**, particularly for raw milk.

One producer described their customers as "tribal", they didn't just purchase the milk; they proudly recommended it, educated others, and helped defend the product in community forums.

This mirrors international consumer data from AUSRawMilk.org (2019), where raw milk demand was most pronounced among health-conscious, environmentally aware families with young children.

B. Infrastructure is a Massive Barrier - But Also a Space for Innovation

The most immediate challenge for producers was sourcing equipment that was affordable, compliant, and appropriate for small-scale operations. Commercial pasteurisation systems often cost six figures and require large-scale outputs to be financially viable. This left farmers with limited options:

- Invest in overbuilt systems and face long ROI periods.
- Attempt retrofitting and risk non-compliance.
- Custom-design machinery, which is both time-consuming and complex.

Milking on the Moove and Happy Cow Milk are standout examples of farmer-led innovation. Both developed or heavily modified their own processing equipment, tailoring it to small-batch efficiency, gentle milk handling, and ease of cleaning.

This innovation space is ripe for public-private collaboration—especially for equipment prototyping and open-source design templates for new entrants.

C. Regulatory Systems Are Rigid, Risk-Averse, and Ill-Suited to Small-Scale Models

Multiple interviewees noted that while MPI's goal of protecting public health was clear and important, the current regulatory framework:

- Fails to accommodate diversity in scale and innovation.
- Creates excessive documentation burdens for very small operators.
- Punishes innovation, as novel approaches (like vending machines or mobile units) often fall into grey areas.

Glen Herud described MPI's refusal to allow town-based milk vending machines as the final nail in the coffin of his raw milk franchise model, despite spotless microbial records. He argued that risk management plans should focus on demonstrated outcomes, not predetermined formats.

The lack of scalable, flexible regulation discourages experimentation and increases startup risk—limiting the sector's capacity to grow.

D. Social Infrastructure is as Important as Physical Infrastructure

Every operator referenced the invisible but essential labour involved in maintaining relationships with customers. This includes:

- Explaining pasteurisation or raw milk handling to new customers.
- Managing bottle return systems and replacing broken containers.
- Dealing with social media feedback, online queries, and farm-gate drop-ins.

This ongoing engagement creates strong brand loyalty but adds emotional and logistical labour. It also requires skills that many farmers do not traditionally cultivate—customer service, marketing, education, and digital communication.

Those who embraced this role (e.g. Lindsay Farm) tended to build stronger, more resilient business models, reinforcing the importance of both personality fit and social capital in this space.

E. Knowledge Gaps Create Avoidable Risk and Isolation

Multiple producers reflected that their early years were marked by trial-and-error. Information on best practices, regulatory compliance, equipment sourcing, and market development was hard to come by. Few had access to formal training or peer mentorship.

Instead, producers relied on:

- YouTube tutorials.
- Cold-calling other farmers.
- Piecing together guidance from MPI documentation and equipment sales reps.

Those who received informal mentorship, like those who consulted with Herud or Lindsay Farm, expressed gratitude but noted the lack of systematic knowledge-sharing across the sector. A coordinated extension programme or regional peer network could offer new entrants a far more secure and informed start.

5.3 Insights from Industry Experts

Two experts contributed deeper, reflective insights that challenge traditional assumptions about small-scale milk production.

Glen Herud – Founder of Happy Cow Milk

Glen Herud offers a unique perspective shaped by years of hands-on experience with raw milk production and sales innovation in New Zealand. His journey with Happy Cow Milk provides both a cautionary tale and a roadmap for future-focused dairy entrepreneurs.

1. Not for the Faint of Heart

- Herud strongly cautions that on-farm milk sales are not suited to the average dairy farmer. The model demands a high tolerance for regulatory stress, customer management, and logistical detail.
- He emphasises that success requires more than just good milk—it calls for passion, perseverance, and an entrepreneurial mindset.

2. Characteristics of Successful Operators

- Those who thrive in the space combine:
    - A clear sense of mission or ethical purpose.
    - Innovative problem-solving in areas like infrastructure, distribution, and compliance.
    - A willingness to embrace direct-to-consumer marketing, often through social media and local engagement.
- In his words, these operators are not “just farmers,” but rather multi-skilled business owners with a deep understanding of their consumers.

3. Regulatory Frustration

- Herud is outspoken in his criticism of the current regulatory model for raw milk. He describes it as "fundamentally broken" and incompatible with small-scale operations.
- He cites examples where food safety compliance was met or exceeded, yet innovation was blocked, such as MPI's refusal to permit urban vending machines, despite proven safety protocols.

4. Pioneering and Adaptation

- Herud’s past innovations included:
    - A national franchise network of raw milk suppliers.
    - Purpose-built milk dispensing systems for 24/7 consumer access.
    - A focus on gentle milk handling to preserve quality and reduce bacterial load.
- However, due to tightening regulations and mounting compliance costs, Herud was forced to dismantle the franchise model, despite positive consumer feedback and testing results.

5. Shifting to Enable Others

- Today, Herud’s focus has moved from direct production to supporting others in the industry.
    - He sells portable milk dispensers and consults on custom-built, mobile pasteurisation systems.
    - His goal is to lower the barriers to entry for farmers who want to explore localised milk models without the heavy investment or risk he once carried alone.

6. Vision for the Future

- Herud believes the future of milk lies in small, community-focused, transparent systems.

- He envisions a sector that values milk quality, animal welfare, and sustainability, underpinned by modular technology and open-source sharing of knowledge.
- However, he stresses that regulatory reform is essential, without it, "good people will give up, and good milk will go undrunk."

MPI Emailed Response

Online MPI emailed response to questions added that:

1. Regulatory Requirements and Frameworks

- All milk producers must comply with existing regulations regardless of business size or commercial viability.
- Farmers producing raw milk must register under the Regulated Control Scheme (RCS), while those producing pasteurised milk require a full Risk Management Programme (RMP).
- MPI does not provide direct consultancy support due to regulatory impartiality but offers guidance and consultant directories for producer assistance.

2. Testing and Compliance Burden

- Raw milk requires pathogen testing in recognised laboratories (Part 6, Clauses 11-16 of the Animal Products Notice), with annual testing costs often exceeding NZD $10,000.
- Pasteurised milk requires less microbiological testing but still involves validation of pasteurisation and monitoring of milk temperature and hygiene.

3. Sales and Distribution Rules

- Raw milk sales are restricted to direct consumer purchases and cannot be sold in retail outlets or used in restaurants.
- Pasteurised milk has no such restrictions and can be sold through retail and hospitality channels, making it more scalable for commercial operations.

4. Verification and Enforcement

- Raw milk producers undergo:
    - Annual verification (increased frequency if non-compliance is observed).
    - Farm dairy assessments every 6 months initially, then annually.
- Offences and penalties are outlined in Part 8 of the Raw Milk Regulations 2015. MPI enforces these regulations actively, as demonstrated by several prosecutions for unregistered or non-compliant operators.

5. Infrastructure, Labelling, and Record-Keeping

- On-farm infrastructure and milk delivery requirements are specified in Parts 2–4 and 9–10 of the Animal Products Notice.
- Labelling and traceability requirements differ:
    - Raw milk: must follow Part 8 of the RCS Notice.
    - Pasteurised milk: must comply with the Food Standards Code.
- MPI provides record templates and guidance for on-farm procedures and traceability.

6. Policy and Review

- The 2015 Raw Milk for Sale to Consumers Regulations were last reviewed in 2018, with no changes planned.
- Policy documents, surveys, and Cabinet papers reflecting stakeholder feedback are publicly available, illustrating the ongoing debate between food safety and business feasibility.

Summary of Key Findings:

On-farm milk sales in New Zealand are not a mainstream alternative, but they are a powerful niche opportunity for farmers with the right mindset, support systems, and consumer base. The greatest barriers are structural, compliance frameworks, infrastructure, and isolation, not market demand. The model is working now for a committed few; with targeted support, it could succeed for many more.

6. Conclusions

The findings of this research illustrate the evolving potential for on-farm milk sales in New Zealand's dairy sector. While the concept holds clear appeal, economically, socially, and ethically, it remains constrained by regulatory complexity, infrastructure challenges, and knowledge gaps. This chapter draws together the key learnings and assesses the alignment of findings with the original research objectives.

6.1 Summary of Key Learnings

a. There Is Genuine and Growing Consumer Demand

One of the most consistent insights across both literature and interviews was the strong consumer appetite for traceable, ethical, and high-quality milk products. Customers were not merely purchasing for nutritional purposes; they were seeking a values-based experience, connecting with farmers, supporting animal welfare, and consuming food perceived to be healthier and more natural.

This reflects both local and global consumer trends in ‘conscious consumption,’ particularly among young families and wellness-oriented buyers. The strength of this demand validates on-farm milk sales as a legitimate market opportunity, particularly when paired with compelling storytelling and transparent practices.

b. Regulation Is the Dominant Constraint

The Raw Milk for Sale to Consumers Regulations 2015 were frequently cited as too rigid for small-scale operators. While public safety is a valid concern, the current framework lacks proportionality, treating micro-operations with the same risk lens as industrial processors.

The compliance burden—especially the cost and complexity of Risk Management Plans (RMPs), limits entry, stifles innovation, and reduces long-term viability. Even pasteurised milk producers reported difficulty interpreting and navigating the broader MPI compliance ecosystem, especially in the absence of advisory support tailored to small operations.

c. Innovation Exists but Lacks Structural Support

Multiple operators displayed remarkable innovation—customising equipment, rethinking distribution (e.g., milk vending), and adapting marketing to local contexts. These innovations speak to the entrepreneurial capacity of the sector. However, they often occur in isolation, without technical assistance, funding support, or peer networks. This increases risk, discourages replication, and limits scalability.

d. Infrastructure Is a Gatekeeper to Entry

Commercial equipment is designed for volume, not agility. Pasteurisers, bottling lines, and washing machines are expensive, oversized, or unavailable in New Zealand for niche producers. Those who succeeded built or adapted systems themselves, but this approach is not practical for the majority of farmers.

Shared infrastructure, mobile processing units, or regionally coordinated cooperatives could dramatically improve accessibility and lower startup risk.

e. Successful Operators Invest in Relationships, Not Just Equipment

A defining feature of viable on-farm milk businesses is the **ability to build and maintain relationships**. Operators are not just milk producers—they are customer service providers, educators, community connectors, and small business marketers. These "soft skills" were repeatedly identified as core to business sustainability but are rarely acknowledged in traditional dairy extension services or training programmes.

f. On-Farm Milk Sales Are Not a One-Size-Fits-All Solution

Perhaps the most sobering conclusion is that this path is **not suitable for every dairy farmer**. It requires passion, resilience, adaptability, and time. Most successful producers maintained partial supply agreements with processors like Fonterra to manage risk while slowly building their direct sales model.

However, for those with the right disposition and support, on-farm milk sales can be **economically rewarding, socially meaningful, and environmentally adaptive**.

6.2 Alignment with Research Objectives

This section revisits the research aims stated in Chapter 2 to assess how well the findings aligned with the project's core goals.

Objective 1: Assess the viability of on-farm milk sales in New Zealand

✅ **Met**. The research confirms that on-farm milk sales are viable for a specific subset of farmers, provided they have access to capital, technical support, and regulatory flexibility. The current environment supports only a small number of well-resourced or highly committed operators.

Objective 2: Identify key barriers and enablers of success

✅ **Met**. Major barriers were clearly identified: regulatory compliance, infrastructure costs, limited advisory support, and lack of mentorship. Enablers include strong consumer demand, community engagement, equipment innovation, and hybrid business models.

Objective 3: Evaluate the legal, technical, and operational requirements

✅ **Met**. The research detailed the regulatory requirements under MPI, technical needs for pasteurisation and bottling, and operational demands around customer engagement and logistics. Several practical examples and expert reflections were included.

Objective 4: Understand consumer trends influencing the demand for farm-fresh milk

✅ **Met**. Insights from both literature and interviews consistently highlighted taste, health perceptions, sustainability, and ethical production as core drivers of consumer demand.

Objective 5: Provide practical insights for farmers and policymakers

✅ **Met**. The findings chapter and the following recommendations section provide clear, evidence-based guidance to both farmers considering diversification and policymakers seeking to foster a more inclusive regulatory environment.

Conclusion Summary:

This research confirms that on-farm milk sales in New Zealand represent a powerful but currently underdeveloped model for dairy diversification. The demand exists, the innovation capacity is present, and the social value is strong. However, realisation of this potential depends on **policy reform, infrastructure support, peer-to-peer learning, and industry coordination**.

As the dairy sector continues to evolve under economic, environmental, and consumer pressures, direct-to-consumer milk models offer not just economic opportunity, but a chance to rebuild public trust, decentralise food systems, and return narrative power to farmers.

7. Recommendations

Building on the insights and conclusions of this project, the following recommendations aim to provide a pathway for future growth, support, and sustainability of on-farm milk sales in New Zealand. These are organised into three categories: practical steps for farmers, policy and industry recommendations, and future research opportunities.

7.1 Practical Steps for Farmers Considering Diversification

For farmers exploring the potential of on-farm milk sales, careful planning, realistic expectations, and a long-term mindset are essential. The recommendations below are designed to help reduce risk and improve the chances of success.

a. Conduct a Feasibility Assessment and Pilot Model

Farmers should begin with a **small-scale pilot**, perhaps supplying friends, local cafés, or through a farm-gate model before investing in full-scale processing infrastructure. A feasibility study should include:

- Local demand (within a 30-50 km radius)
- Compliance costs (RMP preparation, microbiological testing, facility upgrades)
- Labour requirements for customer engagement and delivery
- Cash flow forecasting under multiple pricing and volume scenarios

This staged approach reduces financial risk and helps test systems, branding, and logistics.

b. Seek Peer Mentorship and Industry Advice

Learning from existing producers, particularly those already navigating the same regulatory and logistical challenges, is one of the most effective ways to avoid costly mistakes. Prospective farmers should:

- Visit other on-farm milk businesses (where permitted)
- Attend workshops or webinars if available
- Engage with support networks (e.g., through social media groups or farm discussion circles)
- Consider consulting services like those offered by Herud or Happy Cow Milk

Creating informal partnerships during the setup phase can offer ongoing technical and emotional support.

c. Invest in Fit-for-Purpose Infrastructure and Gentle Processing Systems

Rather than retrofitting unsuitable equipment, farmers should invest in:

- Compact pasteurisers built for small-batch operations
- Bottle filling and cleaning systems that are efficient, safe, and compliant

- Variable speed diaphragm pumps (as recommended by Herud) to protect milk integrity

Where capital is a constraint, consider shared ownership models with neighbouring producers or leasing mobile units.

d. Build a Brand Before You Build Volume

Successful on-farm milk producers don't compete on price, they compete on values, quality, and connection. Farmers should invest early in:

- Visual identity (labels, social media presence, signage)
- Consistent messaging around animal care, quality, and freshness
- Community building, whether online or at the gate

Focusing on customer trust and loyalty creates a stable base of repeat buyers.

e. Embrace the Role of Educator and Communicator

On-farm milk sellers must be prepared to explain:

- The difference between raw and pasteurised milk
- Storage and safety requirements
- The value behind their pricing

This human connection is not optional, it is what differentiates on-farm milk from supermarket milk. Farmers should treat education as a core business function, not an afterthought.

7.2 Industry Support and Policy Implications

The viability of on-farm milk sales will remain limited without structural support from regulators and industry bodies. The following policy-level recommendations are aimed at enabling safe innovation while ensuring public health standards are maintained.

a.Introduce a Tiered Regulatory Framework for On-Farm Milk Sales

MPI should develop a risk-proportionate model that:

- Distinguishes between small and large operators
- Offers graduated compliance options based on volume and process type
- Streamlines RMP templates for direct-to-consumer models
- Encourages innovation through pilot approvals and feedback loops

This would recognise the differing risk profiles of small-scale operations versus industrial processors and reduce unnecessary compliance burdens.

b. Support the Development of Mobile and Shared Infrastructure

Government and industry should co-invest in:

- **Mobile pasteurisation units** (e.g. housed in shipping containers)
- **Shared bottling facilities** in rural hubs
- **Processing cooperatives** that allow multiple farms to use one licensed system

These approaches reduce capital barriers for individual farmers and create stepping stones toward full independence.

c. Fund a National Mentorship and Extension Programme

MPI, DairyNZ, or regional councils could coordinate a mentorship initiative pairing experienced on-farm milk producers with new entrants. This would:

- Reduce trial-and-error learning
- Encourage safe, compliant practices
- Improve knowledge transfer and foster collaboration

Online resources, including case studies and regulatory walkthroughs, could supplement in-person guidance.

d. Enable Safe and Regulated Vending Models

MPI should revisit its stance on town-based vending machines, as:

- International evidence shows safe operation is feasible with remote hygiene monitoring
- These systems reduce staff time, offer 24/7 access, and appeal to eco-conscious urban consumers

A pilot programme could help gather data and identify any needed safeguards while expanding consumer access.

e. Develop Targeted Funding Mechanisms for Small-Scale Diversifiers

Dedicated diversification funds (e.g. under MPI's Sustainable Food and Fibre Futures) could be adapted to include:

- Capital grants for compliant infrastructure
- RMP subsidy schemes for first-time applicants
- Low-interest loans tied to verified sustainability and community outcomes

These mechanisms would send a clear signal that small-scale innovation is valued and investable.

7.3 Future Research Opportunities

While this project provides foundational insight, further research is necessary to support the growth and resilience of this sector.

a. Quantitative Consumer Research

Future studies should:

- Quantify demand for on-farm milk across regions
- Explore willingness to pay for various formats (raw vs. pasteurised, glass vs. plastic)
- Analyse consumer perceptions of safety, convenience, and ethical production

This data could help farmers make informed decisions and guide regulatory thresholds.

b. Environmental Impact Analysis

More research is needed into:

- The environmental footprint of on-farm milk sales vs. traditional supply chains
- Glass bottle reuse and return models
- Energy and water use in small-scale pasteurisation systems

Quantifying these impacts could strengthen the environmental case for on-farm models.

c. Economic Modelling Across Scenarios

Building on this qualitative work, a full economic feasibility model should be developed for:

- Different farm sizes and geographic contexts
- Raw vs. pasteurised processing
- Direct vs. third-party sales
- Vending vs. delivery vs. on-farm pick-up

Scenario modelling would help new entrants understand both ROI timelines and risk profiles.

d. Cross-Country Comparative Studies

New Zealand is not alone in navigating the resurgence of direct-to-consumer dairy. Comparative studies with:

- Australia
- Switzerland
- United Kingdom
- United States

...could yield transferable insights about regulation, consumer engagement, and decentralised systems of distribution.

Closing Note on Recommendations:

On-farm milk sales present an opportunity to revitalise relationships between producers and consumers, diversify farm incomes, and reshape narratives around food quality and origin. But their success will depend on a collective effort, where farmers, regulators, engineers, marketers, and consumers co-create a system that values transparency, flexibility, and scale-appropriate innovation.

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Ange Brooks (Lindsay Farm). (2025). Interview with director. Personal communication.

9 Appendix

Appendix A: List of Farmer Interviews

The following dairy operators were interviewed between February and May 2025 as part of the primary research for this project. All interviews were conducted via phone, video call, or on-farm visits. Consent was obtained from all participants.

Interviewee	Operation	Location	Focus
Glen Herud	Happy Cow Milk	Canterbury / Waikato	Innovation, mobile processing
Hamish Hodgson	Volcanic Creamery	Taupō	Pasteurised milk factory model
Shelli & Steve Mears	Otago Fresh	Otago	Five-litre refillable pail model
Gavin Hogarth	Bella Vacca Milk Co.	Canterbury	Pasteurisation and compliance
Geoff & Beth Henderson	Henderson Dairy	Waikato	Raw milk and community trust
Rach & Rich Risdon	Raw Milk (UK)	England	International case comparison
Richard Houston	Village Milk	Golden Bay	Vending machines and franchising
Andrea Weir	Real Milk Timaru	South Canterbury	Raw milk under RCS scheme
Ange Brooks	Lindsay Farm	Hawke's Bay	Legal reform and compliance

Farmer Interview Questions

For Kellogg Rural Leaders Project: Dairy Diversification into Raw and Pasteurised Milk Sales in New Zealand

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👩‍🌾 Background and Motivation

1. Can you briefly describe your farm and how long you've been involved in selling raw or pasteurised milk directly to consumers?
2. What motivated you to diversify into on-farm milk sales?
3. Was your primary goal additional income, lifestyle change, customer connection, succession planning—or something else?

🔄 Transition and Setup

4. What was the most challenging part of getting set up for raw or pasteurised milk sales?
5. How long did the process take from decision to first sale?
6. What kind of infrastructure and equipment did you invest in, and were there any unexpected costs?

🛠️ Regulatory and Compliance

7. How would you describe your experience navigating MPI regulations—clear, manageable, or overly complex?
8. Which parts of the regulatory process were most difficult or frustrating?
9. Did you receive adequate support or guidance from MPI or other sources?
10. Have you ever had an audit or compliance check? If so, how did that go?
11. Do you feel the regulations strike the right balance between safety and practicality?

💡 Risk Management and Food Safety

12. How do you manage food safety on a day-to-day basis?
13. What testing do you carry out, and how frequently?
14. Do you use third-party labs, and has that been cost-effective?

📦 Sales and Customer Relationships

15. Who are your typical customers (e.g., locals, health-conscious families, niche retailers)?
16. How do you market your milk products?
17. What feedback do you get from customers—especially in regard to taste, packaging, or convenience?
18. Do you sell raw milk, pasteurised milk, or both? What demand differences have you noticed between the two?

📈 Business Model and Profitability

19. Has the diversification been profitable for your farm?
20. What are your biggest ongoing costs—compliance, equipment maintenance, labour?
21. Do you believe on-farm milk sales could be a sustainable long-term income stream for other farmers?

💬 Reflections and Recommendations

22. What advice would you give a farmer considering starting raw or pasteurised milk sales?
23. If you could change one thing about the regulatory system, what would it be?
24. Have there been any unexpected benefits—community engagement, personal satisfaction, innovation?

25. Do you believe current regulations are helping or hindering the growth of on-farm milk sales in New Zealand?

Appendix B: Summary of Consumer Survey

A consumer survey was conducted online and distributed via Facebook groups, email, and farm newsletters. A total of 63 responses were received.

Key Survey Metrics:

- 60% regularly purchase raw milk
- 40% consume 2–5L per week
- 80% said they were "very satisfied" with product quality
- 65% were willing to pay more for sustainable packaging
- 70% preferred reusable containers (glass or pails)

Most Common Purchase Methods:

1. On-farm dispenser (55%)
2. Home delivery (30%)
3. Local pickup point (15%)

Consumer Survey – On farm milk sales

Section 1: Background Information

1. **Which best describes your household?**
   ☐ Single
   ☐ Couple
   ☐ Family with children
   ☐ Multi-generational household
   ☐ Other: _____

Section 2: Milk Buying Habits

2 **How do you purchase your milk?** (tick all that apply)
   ☐ From an on-farm dispenser
   ☐ Delivered to my home
   ☐ Picked up from a drop point (e.g. market, local store)
   ☐ Other: _____
3 **How often do you purchase milk directly from a farm?**
   ☐ More than once a week

☐ Weekly
☐ Fortnightly
☐ Monthly
☐ Occasionally

4 **What type of milk do you typically buy?**
☐ Raw milk
☐ Pasteurised milk
☐ Both
☐ Not sure

5 **How much milk do you buy per week (on average)?**
☐ Less than 2 litres
☐ 2–5 litres
☐ 5–10 litres
☐ More than 10 litres

Section 3: Motivations and Preferences

6 **What motivates you to buy milk directly from a farm?** (tick all that apply)
☐ Better taste
☐ Health benefits
☐ Support local farmers
☐ Environmental sustainability
☐ Animal welfare
☐ Cost
☐ Traceability / Transparency
☐ Reduced packaging
☐ Other: _____

7. **How satisfied are you with the milk you receive?**
☐ Very satisfied
☐ Satisfied
☐ Neutral
☐ Dissatisfied
☐ Very dissatisfied
(Optional comment box): _____
8. **Do you prefer reusable packaging (e.g. glass bottles or pails)?**
☐ Yes
☐ No
☐ No preference
9. **Would you pay slightly more to support environmentally friendly practices (e.g. glass return systems, regenerative farming)?**
☐ Yes

☐ Maybe
☐ No

Section 4: Safety and Trust

10 How confident are you in the safety of the milk you purchase?
☐ Very confident
☐ Somewhat confident
☐ Neutral
☐ Not very confident
☐ Not confident at all

Appendix C: Regulatory Documents Reviewed

- *Raw Milk for Sale to Consumers Regulations 2015* (MPI)
- *Animal Products Notice: Raw Milk for Sale to Consumers Regulated Control Scheme 2022*
- *Food Standards Code 4.2.4 – Dairy Production and Processing* (FSANZ)
- *NZCP1: Code of Practice for the Design and Operation of Farm Dairies*
- MPI RMP Templates for Farm Dairies and Pasteurisation Facilities

Appendix D: On-Farm Processing Equipment Considered

Equipment	Supplier	Notes
Diaphragm milk pumps	DMP Dairy	Gentle milk flow, low shearing
Small-batch pasteurisers	Milkbot NZ	Suitable for 50–500L/day
Glass bottle fillers	PakTech / manual	Adjustable for hygiene/speed
Cold storage units	Chilltech NZ	Required for <4°C holding