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Enhancing Value for New Zealand Farmers by Improving the Value Chain

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Hugh McDonald
Tim Driver

Research Report No. 324
November 2011

Lincoln University
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ISSN 1170-7682 (Print)
ISSN 2230-3197 (Online)
ISBN 978-1-877519-20-8

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Acknowledgements

This report has been produced as background to a dialogue process focussed on agricultural emissions and is released publicly to facilitate discussion. This project has been funded by the Ministry of Agriculture and Forestry under the Sustainable Land Management and Climate Change programme. We appreciate the participation of members of the AgDialogue group whose discussions and insights have informed this paper. Any opinions expressed are those of the authors and do not reflect the views of the funders or study group. The authors remain responsible for any errors and omissions.

Executive Summary

This report explores the opportunities for New Zealand farmers to increase their returns through higher value added for their products. The paper explores the international context in which New Zealand trades its agricultural products. Historically, market access has been a major issue for New Zealand agricultural exports. This is still an issue, but there has been a relaxing to trade restrictions allowing greater access to some markets as well as growing opportunities in the emerging markets.

The change in agricultural policy which has led to the reduction in market distortion, especially in the EU, but also in Australia and the US, has given opportunities for New Zealand exports. However, there has been a switch of emphasis of this support towards support for social and environmental outcomes. These changes, alongside the growth in market assurance schemes from retailers and other market gatekeepers, have increased the requirement for products to meet various social, environmental, and welfare criteria.

There is a range of market assurance schemes with different retailers vying for market share by stressing different attributes. The growth in these schemes can be illustrated by the growth in GLOBAL G.A.P. which has voluntary international standards for certification for agricultural products. It was established by European retailers as a basis certification scheme around social, animal welfare, environmental and labour issues. This now covers 100 countries with over 100,000 producers certified. The growth in these schemes reflect the growing demand for consumers in high value premium market segments for environmental, social, welfare and labour attributes of food.

There are three potential options to improve the value added of agricultural products: better positioning of existing exports in overseas markets, value added processing, and niche production and marketing. The paper discusses these options and also the challenges New Zealand agricultural producers may face implementing them. The first of these, better positioning of existing products, builds on the changing market requirements and increasing demand for credence attributes, and investigates how these changes can be levered to enhance value add. Some agricultural sectors in New Zealand have been more successful than others at levering value from existing products, creating premium products, and translating these benefits into increased payments for farmers. Zespri, the monopoly seller of New Zealand kiwifruit, and Icebreaker, a woollen clothing producer, provide potential models for other industries looking to achieve enhanced returns for their products.

The second way by which New Zealand can obtain greater value added from its agricultural produce is through value added processing. There are many exemplars of this. There are, however, challenges that New Zealand companies face in taking this route. The fact that the domestic market is small means companies have to export earlier in their lifecycle than is typical overseas. The distance from market can make market positioning more difficult, as well as other more generic issues such as access to capital. Solutions vary, but good collaboration can help, as well as joint ventures.

Finally, niche marketing is also a way of leveraging value added. This tends to suit small scale operations but can be an important way that a few farmers can lever value added by targeting niches within the domestic market such as restaurants and/or farmers markets. This does have greater opportunity though with web based selling and the growing potential for export niches.

The changing international environment for New Zealand farmers does bring challenges but also opportunities. New Zealand famers have the potential to enhance the value of their production by ensuring its attributes are recognised in the market place, and the maximum value obtained for these. This requires attention to the attributes that markets are willing to pay for and ensuring that this value is captured and transmitted down the value chain.

Chapter 1
Introduction

Agriculture is New Zealand's main export, and it is in this sector that some of the greatest changes in demands for attributes of production and processing are being seen. These changes are both consumer- and retailer- driven, but also come from how overseas governments support their agricultural sectors. At the same time, there is increasing pressure on New Zealand agricultural producers to reduce the greenhouse gas emissions associated with production. This paper will discuss in brief the developments in New Zealand's major agricultural markets, and how producers in New Zealand could explore these to enhance the value they receive for their products. Getting more value from agricultural production will enable farmers to address agricultural emissions without causing major pain in the agricultural sector.

1.1 International context

Historically, market access has been the biggest impediment to New Zealand exports, and this is still an issue. However, changes in key policies overseas have meant an increasing relaxation of trade-restrictions. Agricultural policy in our traditional export markets have shifted focus towards social and environmental protection and enhancement. This has implications for New Zealand's producers and exporters as these social and environmental concerns may become market access requirements, or alternatively, production that recognises these concerns may obtain higher prices: a 'green premium'. Alongside these changes, New Zealand is increasingly selling agricultural produce in non-traditional export markets such as China; the impacts of these changes are also discussed.

1.1.1 Europe and USA

Government policy

The shift in European policy from guaranteeing minimum prices for farmers to focussing on environmental outcomes is illustrated most clearly by the changes in the European Union Common Agricultural Policy (CAP). Providing minimum payments for farmers has been European Union (EU) policy since its foundation in 1957.[1] This policy of minimum agricultural prices continued the practice of continental Europe, that of restricting imports in order to raise domestic prices.

However, in recent years the EU has begun to make significant changes to CAP policy. The Agenda 2000 reform changed the objectives of the CAP and broadened the policy to include rural environmental management, requiring that environmental issues are taken into account. The most radical change was made in 2003 with the introduction of the Single Farm Payment (SFP) which shifted policy from market-based support towards direct payments to farmers based on social and environmental criteria[2]. From the perspective of New Zealand producers this is a positive change in policy; market based support has historically caused, and continues to cause, hardship for New Zealand producers. Additional incentives such as the Environmentally Sensitive Areas policy (ESA) continue, as well as additional subsidies such as those for farmers who join food quality certification schemes.

[1] Indeed, the EU's founding document, the Treaty of Rome, includes in Article 39 a section concerned with the development of a common market and policy for agriculture.

[2] The budget for the SFP policy is 75 billion Euros per year, which is comparable to New Zealand's annual national income. The SFP scheme is currently set to continue until 2012 and will almost certainly continue after this (EU Regulation 1257/99).

This shift in the EU CAP towards stronger environmental requirements will continue. A recent internal review of the CAP, the 'CAP Health Check', proposes reducing financial support to farmers and trade distortions so that European agricultural production becomes more market driven, and also sets out environmental requirements (European Commission, 2010). Farmers will be required to protect wild birds and conserve natural habitats of wild flora and fauna, and to take measures to protect groundwater and reduce soil pollution, in particular by reducing nitrates from agricultural sources. The latest proposals also include an extra two billion Euros to allocate to schemes that address new challenges facing the rural environment, including climate change. Indeed, as a result of these changes, comments have been made that the Common Agricultural Policy is becoming more of a Common Environmental Policy.

Recent United Kingdom (UK) Government reports further illustrate these European trends. The Food 2030 report sets goals that include the promotion of consumption of healthy, sustainable food, as well as food production practices that: use global natural resources sustainably, promote high standards of animal health and welfare, protect food safety, make a significant contribution to rural communities, and allow the UK to show global leadership in food sustainability (HM Government, 2010). A similarly-themed report by the UK Department of Environment, Food and Rural Affairs outlines a broad-spectrum action plan for improving sustainable practices across the UK supply chain (DEFRA, 2006). Within this, the food industry is put forward as a key sector within the UK to improve sustainable practices. Included in the report are initiatives to encourage the use of ethical products (i.e., fair trade, animal welfare) and the implementation of better regulation to ensure that environmental and/or sustainable practices are carried out within the food sector.

Some similar shifts can also be seen in the United States (US) and in Australia, though these changes are occurring at much slower pace. The 2008 US Farm Bill, the key US agricultural policy bill, included extensive proposals for conservation of land. Examples include the Conservation Stewardship Program, which rewards farmers who make conservation efforts on their lands. In addition, in 2009 the United States Department of Agriculture (U.S.D.A.) launched the "Know Your Farmer, Know Your Food" campaign, also known as the KYF Initiative. The initiative encourages the public to gain a better understanding of the origins of their food, and to better comprehend the connection between food production and consumption, and the associated processes and environmental impacts (Hardesty, 2010). The Australian government has implemented the Caring For Our Country scheme to encourage environmental stewardship. This scheme rewards farmers who make efforts to protect and sustain the Australian national reserve system, biodiversity and natural icons, coastal environments and critical aquatic habitats, sustainable farm practices, community skills, knowledge and engagement, and natural resource management in northern and remote Australia (NRM, 2011).

These changes in agricultural policy in New Zealand's traditional agricultural export markets have the potential to affect New Zealand in a number of ways. There is the potential for these countries to introduce restrictions on trade in products not produced under the same sustainability conditions, although under current World Trade Organisation (WTO) rules this would be difficult. The real threat comes in the link between the change in policy and the growth in market assurance schemes. These market assurance schemes, which stress the sustainability attributes of products, are driven by retailers and suppliers and cover the whole of the supply chain. The changing focus of US and EU agricultural policy expenditure to aid farmers to meet environmental, welfare, and social criteria will assist these farmers in meeting the growing requirements of these market assurance schemes. These schemes are growing in importance and are already a requirement to enter some key supply chains.

Retailer policy

The importance of these policies and schemes can be seen by the growth in GLOBAL G.A.P (Good Agricultural Practice, previously EurepGAP[3]). GLOBAL G.A.P. is a private sector body that sets voluntary international standards for the certification of agricultural products. It was established by European retailers in 1997 to harmonise their individual responses to growing consumer concerns around product safety, animal welfare, environmental and labour standards. GLOBAL G.A.P. is the most important private standards framework for developing countries, particularly since January 2005 when European retailers made the certification under GLOBAL G.A.P. standards mandatory for its suppliers, including small-scale farmers in developing countries. It is now the world's most widely-implemented farm certification scheme, covering 100 countries. The GLOBAL G.A.P. scheme includes requirements or recommendations for environment and hygiene, environmental management (including wildlife policy), groundwater, staff facilities, training, and health and safety for farmers. Whilst not all of these are "must dos" at present, but are instead "recommended", the subsidising of EU and US farmers to meet these requirements will enable them to become "must dos" sooner (GLOBAL G.A.P., 2009-2010; Saunders, 2008). [4]

As well as using GLOBAL G.A.P., many retailers also belong to other schemes or have their own more stringent schemes. Waitrose (which accounts for 3.7 per cent of UK supermarket sales), is a member of a scheme called LEAF Marque[5] and has pledged that by 2010 all produce will be produced to the high sustainability standards under this scheme. These include minimising the use of pesticides, encouraging natural predators, retaining 'green corridors' to protect wildlife, conserving water and energy, and maintaining soil vitality through crop rotation. Similarly, Tesco has developed Nature Choice, an integrated farm management scheme introduced in 1992, which sets environmental standards and specifies shape, size, taste, variety and shelf life requirements of food. All of the 12,000 growers (domestically or internationally) from whom Tesco source product are registered with Nature Choice and must comply with the standards. On top of this, Tesco have invested US$1 billion in their Green Pledge, in which they intend to promote "a mainstream revolution in green consumption". Marks & Spencer has invested US$400 million in establishing their Eco-Plan A campaign, which aims to introduce more sustainable protocols for the reduction and management of waste and also attempts to reduce their carbon emissions (Marks and Spencer Group, 2010)[6].

This supermarket emphasis on sustainability is not unique to the UK, but is also present throughout Europe and the US. The French retailer Carrefour is involved in promoting their "Locavore" campaign, encouraging consumption of local foods to reduce food miles of stocked products, as well as carbon counting. US giant Wal-Mart has also attempted to improve their chain efficiencies through their Good Steward campaign (ZESPRI, 2007).

Consumer shifts

These shifts in government and retailer policy are motivated by increased consumer concern in these markets about the provenance of their food, and the sustainability of its production. This posits risks and opportunities for New Zealand's agricultural producers: if they can produce food which appeals to these concerned consumers, they can command a 'green premium'; however, if

[3] More information on GLOBAL G.A.P. can be found online at http://www.globalgap.org.
[4] On top of its increasing importance, the requirements of GLOBAL G.A.P are strengthening, for example, in September 2009 the consultation period for Version Four started in which water use was added to the compliance criteria.
[5] Leaf Marque was established in 1991 to promote integrated farm management as part of a European wide movement - the 'European Initiative for Sustainable Agriculture' (EISA). Similar projects also operate in Germany, France, Italy, Sweden and Luxembourg. See www.leafuk.org
[6] Since 2007, under this scheme they have succeeded in cutting carbon emissions from operations by 8 per cent, improved store energy efficiency by 19 per cent (after weather adjustment) and reduced waste sent to landfill by 33 per cent, among other achievements.

they cannot meet the sustainability requirements set by the supermarket gatekeepers, they may find it difficult to export to these markets.

There is growing evidence that consumers overseas are demanding these attributes. An extreme example of this is Wimpole farm in the UK, a National Trust farm where the manager has established a scheme where up to 10,000 of the general public, by paying a subscription of 30 pounds, can comment on farm practice and also buy produce. Whilst the potential for such schemes may be limited, it does illustrate the different attitude towards farming in many of our target markets. Indeed, work by the Agribusiness and Economics Research Unit shows that consumers in these markets are concerned about sustainability, and are willing to pay for food that is produced and marketed in a way that addresses these concerns (Saunders et al., 2010). This research shows that international consumers are particularly concerned about the carbon footprint of food, ecological issues of production (animal welfare/biodiversity), and ethical issues (such as FairTrade).

1.2 Emerging markets

New Zealand is also increasingly exporting to countries outside of our traditional developed-country markets. Indeed, in 2010 New Zealand's largest single market for agricultural exports was China, which received 13 per cent of New Zealand's agricultural exports by value. Traditional markets Australia, USA, Japan and the UK were the next largest markets for exports, collectively importing 32 per cent of our total agricultural exports. However, the next five largest export markets were the less-traditional destinations of Indonesia, Taiwan, Philippines, Malaysia and South Korea. These destinations captured 13 per cent of New Zealand's agricultural exports in 2010, only slightly less than the European countries combined (Statistics New Zealand, 2011).

Retailer requirements and consumer expectations are different in these emerging markets than in New Zealand's traditional agricultural export markets. Consumers in these markets are less concerned with concepts such as sustainability, and more concerned with idealistic attributes, such as a product being "natural" or providing health benefits beyond what a similar product would typically provide. This can be seen in a growing demand for functional and fortified foods across many Asian markets, which represents the second-largest market for functional or fortified foods after the US. Asian markets, combined with the US, account for three-quarters of international functional food demand (Saunders et al., 2010). Countries such as Singapore and Korea are also at the forefront of NZ dairy giant Fonterra's functional ingredients initiatives (Fonterra).

Chapter 2
New Zealand and Value Chains

These changes in the international marketplace for New Zealand's agricultural exports have implications for New Zealand's agricultural industry. This section discusses how New Zealand producers can increase the value they receive for their products given this context, and the potential issues that might limit their ability to respond. Increased value can come from three different sources: better positioning of existing exports in overseas markets, value added processing, and niche production and marketing.

2.1 Existing products

While New Zealand producers have historically been successful at meeting international markets' requirements for physical attributes of products, we have been less successful at increasing incomes by selling the credence attributes of our products. There is significant potential to increase the value of our agricultural produce by marketing these non-physical credence values. As discussed above, there is significant and growing demand and willingness to pay for products that meet customers concerns about sustainable and environmentally friendly ways. New Zealand could appeal to these consumers by telling stories about the social and/or environmental conditions in which New Zealand food is produced, such as family farms or ethical production. These stories could also focus on New Zealand's reputation for a pristine natural environment, and the 'natural' production of food in this environment. In the past, New Zealand producers have responded to changing international requirements and delivered produce that meets the physical demands of markets. New Zealand producers have also developed a good reputation for food safety and quality[7] (Barnao). Building on this history by delivering produce that meets market demands for these credence characteristics could lead to significantly higher agricultural incomes in the future.

However, increasing the value of New Zealand's agricultural production by appealing to these non-physical attributes could prove difficult. New Zealand has a history of guaranteed access to markets, and combined with New Zealand's distance from markets, this has resulted in an agricultural sector which has not exhibited a good appreciation of the importance and value of marketing credence attributes (Coriolis, 2011). This has led to a potential lack of investment in marketing diversified products, and the acceptance of commodity prices for our output. An example is New Zealand sheep meat exports, which in the past has focussed on the commodity trade of whole frozen carcasses (McDermott et al., 2008)[8]. Surmounting these difficulties will require significant co-operation from New Zealand producers at all stages of the supply chain - from suppliers, processors, and marketers - as has been noted by the recent Red Meat Sector Strategy (Deloitte, 2011). Achieving these changes will require that supply chains are empowered and able to pass on information and incentives for particular production methods desired by consumers through to farmers.

Some agricultural sectors in New Zealand have been more successful than others at levering value from existing products, creating premium products, and translating these benefits into increased payments for farmers. Zespri, the monopoly seller of New Zealand kiwifruit, and Icebreaker, a successful New Zealand woollen clothing producer, provide potential models for other industries looking to achieve enhanced returns for their products.

Zespri has been extremely successful in levering value added from kiwifruit. This is partly due to having a monopoly of exports, except to Australia, but not the complete reason. Kiwifruit is a

[7] Examples of this can be seen across New Zealand's agricultural industries, for example, the meat industry has changed over time to provide standard size carcasses, fresh and chilled cuts, and lean meat.
[8] This is changing; see the Red Meat Sector Strategy report (Deloitte, 2011).

product which has many substitutes in other fruits as well as competitors such as Chile, China and EU countries. Despite this, Zespri has increased kiwifruit exports and obtains twice the world price for its kiwifruit. This is due to a number of factors (Kilgour et al., 2007):

> 'Success has come as a result of sound understanding of changing market conditions communicated throughout the industry and leading to informed long-term strategy of a coordinated value chain. The competitive advantage of the New Zealand industry is based upon a number of elements:
>
> - Informed decision making
> - A balanced industry structure
> - An integrated value chain
> - Market driven, industry initiated research and development initiatives
> - A strong differentiated marketing strategy'

New Zealand merino wool clothing manufacturer Icebreaker has also been successful in using credence values to increase the value of their products . Their marketing stresses the products' New Zealand origins, wool's naturalness, and the 'sustainability' of the firm's ethical and environmentally friendly production (Lassiter and Heath, 2006). These advertising techniques are complimented by the use of a "Baa code" system of product traceability, where customers can trace the wool in their product back to the farm of its production (Fifield, 2010). To achieve this, Icebreaker has focussed on ensuring that this 'natural' production ethos is communicated throughout their supply chain. As part of this, all Icebreaker manufacturing plants must produce in accordance with quality and environmental assurance programmes[9]. This approach has allowed Icebreaker to grow revenues to more than $100million in the 15 years since its founding (Icebreaker, 2011).

How successful New Zealand agricultures other industries will be at increasing the value of agricultural produce is likely to depend on how well they can emulate ZESPRI and Icebreaker's success. Recent strategy reports by the dairy and red meat industries indicate that they are focussing on improving co-operation within New Zealand to better co-ordinate international marketing, improve incentive and information pass-through in supply chains, and investing in market driven research and development (DairyNZ, DCANZ & Federated Farmers, 2009; Deloitte, 2011).

2.2 Value added processing

A recent report completed for the Ministry for Economic Development summarises the potential benefits of increasing the processing of New Zealand's low cost food production here in New Zealand (Coriolis, 2010). The authors argue that as land available for increased production of agricultural commodities is limited in New Zealand, future growth needs to come from increased value of production rather than increased volumes. New Zealand has already had some success in increasing sales of value-added processed foods – particularly in Australia – and building on these successes will achieve increased incomes from agricultural produce across the sector.

However, New Zealand firms can face real difficulties when trying to export (The Boston Consulting Group, 2004). New Zealand's small domestic market means companies have to export at a much earlier stage of their development than is typical for companies in other countries. The small scale of such firms makes access into overseas markets more difficult, due to factors such as the cost of meeting regulations and having enough in-country capability to maintain market presence and

[9] Icebreaker prominently states that its manufacturing plants must meet or be working towards quality assurance standards such as ISO9001 and environmental standards such as ISO14001, as well as minimising packaging and looking after workers.

collect market information. Also, due to New Zealand's relative geographical isolation, market information is harder to obtain and finding a position in the market is more difficult. Access to capital at the various stages of company development is also cited as a problem. For example, while angel investor capital for start-ups may be available, the cost of it is often seen as too high. Also, capital for marketing is generally hard to obtain, and access to funds for development beyond initial stages is often not readily accessible in New Zealand. This can result in companies being sold off shore. Examples of this type of activity in the agriculture sector include the recent sale of juice company Charlie's Group Ltd (One News, 2011).

Solutions to these issues will vary by circumstances. Focussing on maximising processed exports in countries where New Zealand is already a significant exporter, such as Australia, will make it easier to obtain market information and to position new products. Leveraging off knowledge and capabilities of established firms and products is another possibility; the beachhead scheme of New Zealand Trade and Enterprise (NZTE) attempts to do just this by linking experienced New Zealand exporters with those attempting to enter new markets.[10] Enabling easier access to capital and decreasing fixed costs of exporting could be achieved by increasing the size of New Zealand businesses. This could potentially be done by following Fonterra's lead and consolidating New Zealand's smaller exporting companies into larger combined businesses. Increasing investment in product development and marketing is another potential solution. Businesses such as ice-cream exporter Emerald Foods, frozen potato chip manufacturer Talley's, and Karicare baby formula are examples of many who are successfully demonstrating the gains achievable by exporting processed New Zealand produce.

2.3 Niche or specialist marketing

There are many examples of small scale producers or farmers who achieve high value through specialist marketing or niche products. These include farmers targeting box schemes, farmers markets, or direct selling to restaurants. Alongside these more traditional small-scale markets, there are increasing examples of farmers direct selling into the market place through web based sales[11]. These products are marketed on a number of criteria including animal welfare, taste, environmental factors, and local attributes, and receive a premium price for the farmer.

However, this solution will only work for farmers and small scale producers who have the time, skills and desire to personally market in this specialist manner. This is likely to limit the gains from this approach to a small proportion of New Zealand's agricultural producers. Given this limitation, increased uptake of this approach could be assisted by providing exemplars for farmers to emulate, and ensuring that rural New Zealand continues to get improved access to the internet.

[10] More information on NZTE's export support schemes can be found online at http://www.nzte.govt.nz/access-international-networks/.
[11] Examples include Lake Farm Beef (http://lakefarmbeef.co.nz/) and Cambrian Fresh Meats (http://www.cambrianmeats.co.nz/).

Chapter 3
Conclusion

As farmers are increasingly required to bear the external cost of the greenhouse gas emissions associated with their agricultural production, maximising the value they receive for their output becomes progressively more important. This aim is complicated by swiftly shifting demands from consumers, retailers, and governments in New Zealand's traditional agricultural export markets for food which is produced in a sustainable way. Governments in these markets are providing support to local farmers to enable them to meet the markets' growing sustainability requirements.

These shifts in consumer and retailer requirements pose both risks and opportunities for New Zealand farmers. If New Zealand agricultural producers can produce and market output that appeals to these sustainability-conscious consumers, they could stand to significantly increase the value they receive for their production. Increasing the value of New Zealand production could be achieved by better positioning of our existing exports in overseas markets, processing our primary output here in New Zealand to increase its value, or by producing niche products.

However, in the past New Zealand producers have faced difficulty maximising the value of our agricultural output. Overcoming problems posed by the generally small scale of New Zealand producers, our relative geographical isolation, and a lack of sophistication in marketing will be crucial to achieve increased value for New Zealand output. Exemplars such as the kiwifruit industry, and companies such as Ice Breaker, demonstrate the success possible when New Zealand companies overcome these challenges.

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