

**The Farmers Club Charitable Trust Agricultural Educator Awards  
2017**

**Comparison of the beef production industry in New Zealand to that in Scotland and how attitudes towards change may differ amongst young farmers and agricultural students.**

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## **Acknowledgements:**

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For hosting me during the visit I owe a huge amount of gratitude to; Massey University, Massey University Young Farmers, Ag Research Centre, Agricultural Greenhouse Gas Research Centre, Ministry of Primary Industries, Beef and Lamb NZ, Meat Industry Association, Anzco Foods, British High Commission, Taratahi Agricultural Training Centre, and KapAg. I would particularly like to thank the many people who shared their time and experiences with me during my study tour. There are too many to list here for fear of missing someone off, but I thank them for taking time out of their schedules to welcome me and show me around.

I would also like to thank my employers and colleagues within SRUC for allowing me the time to undertake the study and the support shown since. Finally, I would like to thank my wife Kate, and son Albie for joining me on the tour.

## Executive Summary

This report set out to investigate some of the differences in beef production and attitudes towards change between the North East of Scotland and New Zealand, with the consideration that the UK may lose agricultural subsidies. The main findings were that whilst beef production systems cannot be directly compared between New Zealand and the North East of Scotland due to climate, regulation and feed availability, however there are opportunities for agricultural students and beef farmers to learn from some best practice seen in New Zealand.

Farms must be considered as farm *businesses* whereby the financial performance must be able to account for itself so that farms can be profitable. Decisions should be made based on profitability rather than appearance or tradition and some traditional methods of farming should be re-evaluated. Agriculture should be market driven whereby farms are producing a product that suits a consumer. Beef farming should be as efficient as possible which should involve monitoring the physical and technical performance of the farm and benchmarking it to similar businesses. Farmers should maximise grass output which may include using paddock, cell and/or technograzing. And agriculture students should be customer focussed and have a global outlook to enable them to capitalise on all available markets to maximise the price achieved.

These findings were shared through social media via facebook updates and 'vlogging', through a PAN-SRUC seminar delivered across Scotland and through local lectures, talks and reports.

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## 1. Introduction

This project arose from teaching agriculture students in the North East of Scotland where there is a very strong beef industry which prides itself on producing high quality beef and retains a premium price over alternatives. However the industry continues to be strongly influenced by 'traditional farming'. Judging decisions made at local and national livestock shows dominate purchasing and breeding choices made by many farmers. Agricultural students are often focussed on producing large beef carcasses finished on high barley yields, with net margins being a lower priority.

Following the vote for 'Brexit' on the 23<sup>rd</sup> of June, 2016, many predicted that this may lead to the removal, or at least reduction, of farming subsidies as they are currently known. With this in mind the fact that many beef enterprises are losing money before subsidies (table 1) raises concerns for the sustainability for the Scottish beef sector as it currently operates.

Table 1. QMS Beef enterprise net margins

Enterprise	Net Margin per head (number in sample)		
	Bottom third	Average	Top Third
LFA Hill Suckler herds	-£406.05 (5)	-£99.34 (15)	£33.35 (5)
Extensive upland suckler herds selling weaned calves	-£87.53 (10)	£2.91 (30)	£113.19 (10)
Uplands herds selling yearling calves	-£216.98 (8)	-£27.65 (25)	£122.60 (8)
Non-LFA lowground suckler herds	-£81.84 (5)	£2.95 (16)	£106.32 (5)
Rearer finisher herds	-£104.83 (7)	-£0.57 (20)	£138.45 (7)
Cereal-based cattle finishing enterprises	-£79.95 (5)	£40.17 (15)	£183.93 (5)
Forage-based cattle finishing under 22 months	-£216.78 (6)	-£74.20 (18)	£131.99 (6)
Forage-based cattle finishing over 22 months	-£130.35 (6)	-£104.75 (17)	-£31.01 (6)

Source: QMS Cattle and Sheep enterprise Profitability in Scotland 2017.

With New Zealand removing their subsidies for agriculture in 1984 and now having a beef industry worth £1.5 billion of which 93% is exported (MPI, 2017b) a question arose as to whether we could learn anything from New Zealand beef production systems.

## **2. Project proposal**

**Aim:** To compare the beef production industry in New Zealand to that in Scotland and how attitudes towards change may differ amongst young farmers and agricultural students.

### **Objectives:**

- Examine the history of farming subsidies in New Zealand and the nature of the beef production industry today to compare to that in Scotland.
- Investigate through focus groups the attitudes of agricultural students, industry and farmers towards change in the beef sector in New Zealand, including:
  - Farming without subsidies
  - Improving farming efficiencies
  - Monitoring technical and financial performance
  - Meeting market requirements
- Analyse the direction of beef production research in New Zealand.
- Investigate how research and improvements in industry are shared with the farming community.

### **Null Hypothesis:**

There is no difference between the attitudes of Scottish students and New Zealanders facing change in beef production.

### **Alternative Hypothesis:**

There is a difference between the attitudes of Scottish students and New Zealanders facing change in beef production.

## **Project timeline:**

Various types of agricultural business and organisations were visited during the study tour. In chronological order, the visits were as such:

21.8.17 - AgResearch Centre

21.8.17 - New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC)

22.8.17 - Anzco Meat Processors

23.8.17 - Massey University

23.8.17 - Massey University Young Farmers

24.8.17 - Ministry for Primary Industries (MPI)

24.8.17 - Beef and Lamb New Zealand (Beef & Lamb NZ)

24.8.17 - Meat Industry Association of New Zealand (MIA)

25.8.17 - KapAg – Whareroa Farm

30.8.17 - Glen Eden Farms

30.8.17 - British High Commission – Wellington

31.8.17 - Taratahi Agricultural Training Centre



### 3. Project findings

#### 3.1 History of beef farming in New Zealand

*Objective 1: Examine the history of farming subsidies in New Zealand and the nature of the beef production industry today to compare to that in Scotland.*

Through the 1970s and 80s New Zealand aimed to increase production for export through government support (MPI, 2017a) and was producing 40million lambs. However at the time there was only a market for 24million lambs, which lead to large numbers of lambs being ‘wasted’. There was also a growing acknowledgement that it was not profitable to subsidise a product for another country to buy. These were in part the reasons for the removal of agricultural subsidies in 1984. Post 1984 the government aimed to promote an industry that would respond to market signals in a profitable manner. Producer support estimates that New Zealand was subsidising at 20% which dropped to 0.5% following the removal of the subsidies in the 1980s (figure 1).

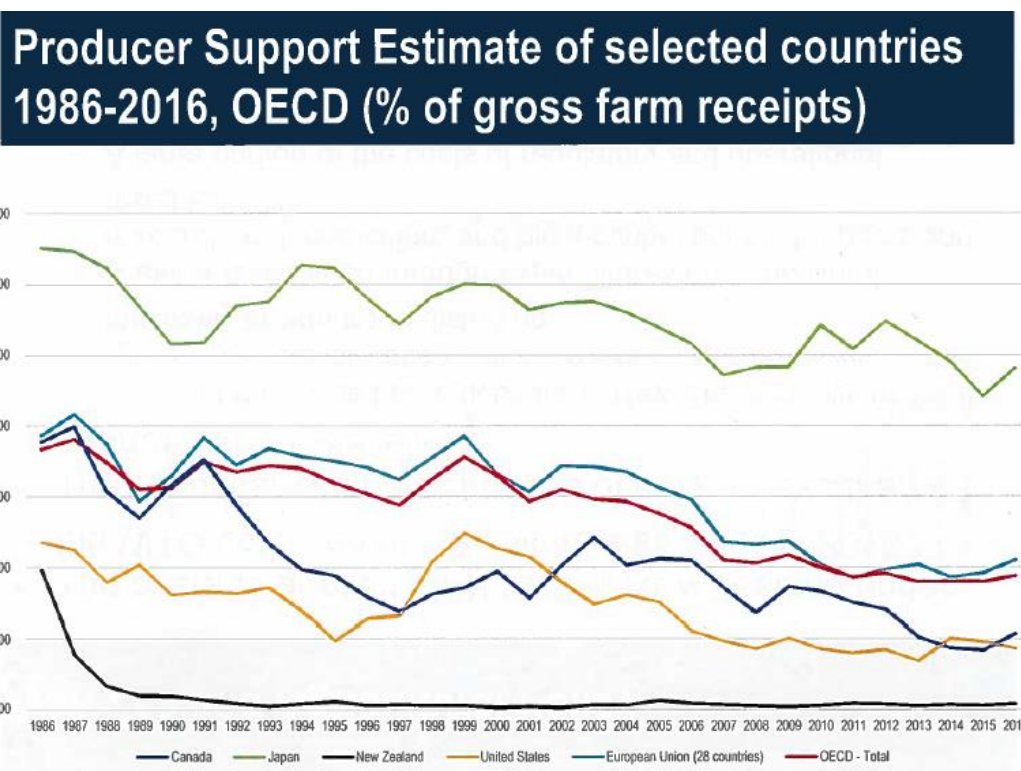


Figure 1. Producer support estimate of selected countries 1986-2016, OECD

Source: Ministry for Primary industries 2017a

Whilst wider perception is often that New Zealand removed agricultural subsidies overnight and offered no support which led to many farms going out of business, this is not strictly true. A rural debt write off programme was set up so that farmers who had grown businesses and borrowed money based on subsidies were not left unable to pay off any borrowings. A exit package was also offered for non-viable farms which gave re-training opportunities to farmers, a car and \$45,000 NZD. Grants were also offered to the wine industry to replace old vines and this incentive revitalised the New Zealand wine industry making it what it is today.



Figure 2. Growing and protecting New Zealand

Source: Ministry for Primary industries 2017a

For New Zealand today the main demand on Government from farmers is to maintain biosecurity for the country, after that there is demand for promoting and developing markets and regulation (figure 2). Whilst subsidies do not exist as direct support however, the Ministry for Primary Industries do have 'Primary Growth Partnerships'. These are business-led, market driven primary industry innovation projects that work on being around 50% funded by Government and 50% funded by industry (figure 3). The government also supports industry led subsidising, for example an initiative called 'Dairy Accord' gives money for agri-environment schemes to farms to help them be compliant with water regulations, amongst others, by granting money to fence off water courses from grazing. This has since been extended to beef and sheep farms and in 2012 was granted ~\$1billion NZD.

As part of this project a meeting was set up between MPI, Beef & Lamb NZ and MIA, which was particularly easy as they are all based in the same building. This in itself allows the three organisations to work together and as such all legislation involves a high level of industry feedback. When writing legislation the focus is to be 'outcome based' rather than prescriptive so that farmers have the freedom to farm in the way that works for that specific land, gives a productive enterprise whilst maintaining any environmental requirements. However it must be noted that whilst the government bodies pride themselves on 'outcome based' legislation, when discussing this with farmers many do not feel they are there yet. At the time of the project New Zealand was in the run up to a general election for their Prime Minister and a hotly discussed topic was that of the effect of agriculture on the environment. Whilst the focus of the government is to have 'clean and green' agriculture many feel the reality is 'dirty and dilute' with the lack of regulation on water use and nitrogen use being of concern to the public.

A key difference between beef production systems in the North East of Scotland and New Zealand is the attitude towards beef. In New Zealand suckler cows are used to break up hill ground for the more profitable sheep enterprises. This allows rough ground that may have become over grown to be utilised. In NE Scotland many farmers could consider themselves a beef farmer first and foremost, and then may have sheep as a grazing tool. This often leads to suckler cows being '*spoilt*' and may not be able to pay their way. As stated earlier, without subsidies, beef farming in the UK may struggle.

## MARBLED GRASS-FED BEEF

Increasing consumer demand for better quality and naturally produced food products, combined with an increasing emphasis on food security provides an exciting opportunity for New Zealand to supply the best marbled grass-fed beef in the world.

### Achievements for the 2015/16 financial year:

- Dairy x Wagyu animals now represent nearly 50 percent of processing numbers and their average marbling scores are exceeding Angus x Wagyu. The average Wagyu x Dairy Marble Score of 5.3 from July to March 2015/16 is 0.5 higher than the same period last year.
- Returns to shareholders have continued to exceed prime steer prices, and exceeded the targeted year-round price of \$6 per kg. The long term sustainable Wagyu offering continues to attract farmers.
- The sale of Wagyu burgers in the United Kingdom continue to gain momentum and a recent promotion for steak cuts sold out in less than 48 hours.
- Steak is available in New Zealand supermarkets.
- The target number of matings for the 2016 calendar year is over 34,000 (up from the original target of 26,000).
- A Regional Producer Group Hub has now been established in the South Island, adding to those existing in the Lower North Island, Central North Island, the East Coast and Northland.

### KEY FACTS:

Programme start: August 2012

Length: 7 years

PGP funding: \$11 million

Industry funding: \$12 million



## RED MEAT PROFIT PARTNERSHIP

The Red Meat Profit Partnership (RMPP) is a highly collaborative programme between the Red Meat Sector with nine partners and the Ministry for Primary Industries. The objective is to drive sustainable productivity improvements in the sheep and beef sector to deliver higher on-farm profitability.

### Achievements for the 2015/16 financial year:

- Completed research across 800 farms and the processing industry in relation to optimal supply arrangements.
- Workshops with high performing farmers were conducted across the country to identify how RMPP can assist them further and how they can share their approaches to assist the rest of the industry.
- The first of three years of trial work with 75 pilot farmers has been completed. Interim results are due in November 2016.
- A "strawman" of an extension system was developed and agreed across all programme partners with discussions underway about implementation.
- Launched the Education in Agriculture pilot and ANZ's Red Meat Privately Owned Business Barometer.
- Completed a proof of concept for the electronic Animal Status Declaration (eASD) in conjunction with OSPRI.
- Completed a trial of the NZ Farm Assurance Programme with 34 pilot farmers.
- Increasing levels of farmers are being engaged in RMPP's capability project. This includes 500 women attending the 'Understanding Your Farm Business' course, which now includes a specific course for Māori women, 140 farmers completing the computer upskilling workshops and 1400 members being involved in the Rural Business Network.
- The Attracting Talent project continues to develop and grow. This includes six tertiary institutions now involved in the Red Meat Network, 41 farmers completing the Rural Mentor Programme, 99 TeenAg clubs nationwide with 1500 members, 15 secondary schools trialling agriculture resources matched to general curriculum and 10 primary schools trialling an agriculture resource and matched to a farm.

### KEY FACTS:

Programme start: November 2013

Length: 7 years

PGP funding: \$32.1 million

Industry funding: \$32.1 million



## FARM<sup>IQ</sup>

Farm<sup>IQ</sup>, owned by Silver Fern Farms and Landcorp, aims to create a demand-driven, integrated value chain for red meat that could grow the sector by 50 percent by 2025.

The programme consists of a suite of projects throughout the value chain, from on-farm production systems and genetics, to processing and analysis of market requirements.

### Achievements for the 2015/16 financial year:

- Turnover for Silver Fern Farms' value-added range of products developed by the programme is now \$68 million with a range of retail and food service products in key international markets. The most recent addition has been the German retail range of lamb, venison and beef in Germany's largest retail chain, EDEKA. Returns are being provided to farmers.
- The Farm<sup>IQ</sup> software now supports close to 4 million (3,937,680) stock units being run on 609,400 effective hectares.
- In April 2016 Farm<sup>IQ</sup> software commercially released two online packages, Health & Safety and Environment Planning, which provide the recording and reporting a farm needs to do based on industry good-practice guidelines. Also, the software now has data linkages with Farmax and Cashmanager Rural.
- The Farm Productive Capacity workstream, working with 11 commercial farms to test the value of measuring and monitoring, has demonstrated an increase in Economic Farm Surplus from \$336 to \$518 per hectare since the start of the programme.
- The Genetics workstream has developed a system for providing accurate and cost-effective predictions of sheep breeding values for meat quality and also supports the wider industry for productivity.

### KEY FACTS:

Programme start: November 2010

Length: 7 years

PGP funding: \$59 million

Industry funding: \$65 million



Figure 3. Example Primary Growth Partnerships

Source: Ministry for Primary industries 2017c

## 3.2 Attitudes of agricultural students towards change

*Objective 2: Investigate through focus groups the attitudes of agricultural students towards change in the beef sector in New Zealand, including:*

- *3.2.1: Farming without subsidies*

Many New Zealanders now look back on subsidies with wonder as to why they lasted so long. With a beef industry now worth £1.5billion of which 93% is exported many say there is clearly no sense in subsidising. From holding a focus group with the Massey University Young Farmers it was interesting to talk to a generation that have no memory of farming with subsidies. Without exception they could not see a benefit of subsidies as it would surely lead to inefficient farming and when a farm *can* be profitable, why would the Government support it financially. Another interesting discussion point was that and subsidy would surely have ‘a catch’ in that there must be some sort of requirement to gain the money. Expanding upon this, the majority of the group all felt that they would rather have the freedom to farm in the way that suited their land, without being subject to additional government controls or restrictions in order to receive a subsidy. However the group did suggest that whilst direct government subsidy doesn’t exist, there are industry led incentives that help improve the perception of the industry, for example Levy board incentives to fence off waterways with money to pay for fences.

- *3.2.2: Improving farming efficiencies*

As suggested by the young farmers focus group, subsidising may lead to less efficient farming. Figure 4 suggests that the removing subsidies in New Zealand has then been followed by a steady increase in output per ewe and per cow, however as practices, breeding and technologies improve this would be anticipated with time. However possibly more damning is that following the removal of subsidies the number of sheep in New Zealand dropped by 50% however the output of lamb is only 9% less (Chand, 2017) demonstrating a clear improvement in efficiency.

The young farmers focus group demonstrated that the business was key to their approach to farming, in particular the financial aspects and net margin. This is in contrast to many students in the North East of Scotland. When discussing showing cattle, arguably the cornerstone of beef breeding in NE Scotland, the group agreed that whilst showing cattle is still important to some, it does not influence breeding choices or purchases for commercial farmers. It is therefore seen as a *hobby* and would not represent modern farming. Again this is in contrast to farmers in NE Scotland where judging decisions made at livestock shows have a large effect on purchasing decisions.

## Removing subsidies helped create a more competitive, innovative and productive agricultural sector

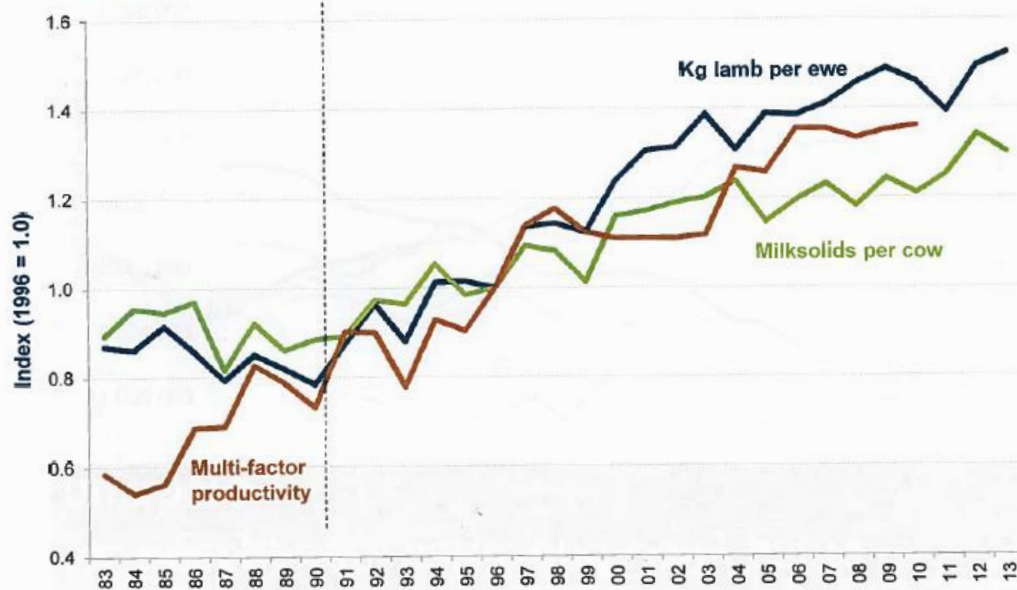


Figure 4. Removing subsidies helped create a more competitive, innovative and productive agricultural sector

Source: Ministry for Primary industries 2017a

This influence continues into the end product of a carcass. In NE Scotland many farmers continue to produce cattle with large carcasses and focus on large rear quarters (figure 5). Whilst these cattle will often perform well in livestock show competitions, the processors are looking to reduce carcass weights and have reduced payable weights over recent years. There is a strong emphasis in New Zealand to be market and customer focussed. This is a significantly different culture that that in the UK where farmers do not have a strong like to their market and customer. Visiting ANZCO confirmed that the current grading systems for carcasses is similar to that in the UK. In New Zealand many farmers put cattle to slaughter at a lighter weight that the slaughterhouses would like, as most cattle are finished on grass they will be slaughtered according to the grass growing season and feed availability. This will lead to farmers getting a lower price for their cattle, however the student focus group suggested the need for focussing on net margins of the whole enterprise. Discussions with MIA also showed that lamb slaughterings (similarly to Scotland) has varies greatly through the year, however so do beef slaughterings (in contrast to Scotland where they remain more consistent) ranging from less than 100,000 head in August to nearly 350,000 in May (MIA, 2017). Whilst this will provide a less consistent supply chain, it demonstrates farmers maximising beef from forage.

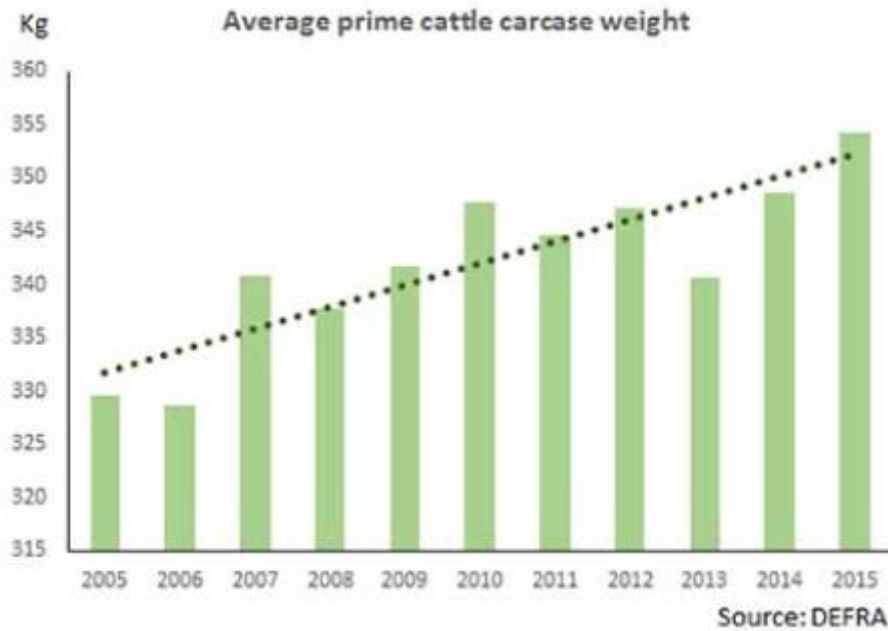


Figure 5. UK cattle carcass weight trend

Source: AHDB 2016

Cell or techno grazing (figure 6) as invented by Harry Weir has also been fundamental in driving efficiency in beef production systems. It has been proven to drastically increase production output (AHDB, 2017) by research funded by AHDB but carried out in New Zealand. Ironically despite it being a UK funded project, this technology is being utilised far more comprehensively in New Zealand than in the UK. Anecdotally, when discussing paddock grazing with UK based students the idea is often met with obstacles to its uptake. When discussing this with agriculture student at Massey University, it was a system that they were all very familiar with and would always strive for such a way to utilise grass. One last difference in New Zealand is that many beef farmers are in essence 'retired' dairy farmers. As dairy farmers they were very used to splitting up fields into paddocks and rotationally grazing grass and as beef farmers they have simply taken this system with them.



Figure 6. Cell grazing system

- 3.2.3: *Monitoring technical and financial performance*

Monitoring technical and financial performance seems to be integral to beef production systems in New Zealand. Benchmarking and key performance indicators are common place and widely utilised. Through discussions with the student groups it is clear that this is the backbone to a successful farm business.

- 3.2.4: *Meeting market requirements*

It was clear from not only the young farmers focus group, but also from visiting Whareroa and Glen Eden farms that meeting market demands is essential to a productive beef enterprise. The farms in particular are focused on producing an animal that is grass fed, this links in with the government bodies selling pasture based livestock production systems to other countries, whilst maximising the efficiency of output. It is common practice for farms to use diverse leys containing chicory and plantain (figure 7) to drive output.



Figure 7. Commonly seen diverse grass ley

Meeting market requirements not only refers to 3.2.2 but also directly connecting with the customer. Professor Nicola Shadbolt (2017) from Massey University felt that one of the keys to farming without subsidies is to make contact with your customer. This was demonstrated at Glen Eden farms where meat is marketed through a larger group called Atkins Ranch where the whole food story is sold (figure 8). One of the challenges of this is that it re-defines the skill set required for a farmer from the *traditional*. Whilst this may pose a challenge for some, this also creates opportunities, particularly for agriculture students who are still at college, to develop a business to be more competitive.

Figure 9 emphasises how the farming industry can change if required and whilst many in UK are sceptical of the potential changes to the UK following Brexit, the loss of subsidies has improved their agricultural industry and forced farmers to become more productive and market led. It would



be fair to say that students in the North East of Scotland are probably not very aware of politics in New Zealand, however the young farmers in New Zealand were very conscious and aware of what was happening in European politics because of the effect it may have on their future, on the other side of the world.



Figure 8. Atkins Ranch

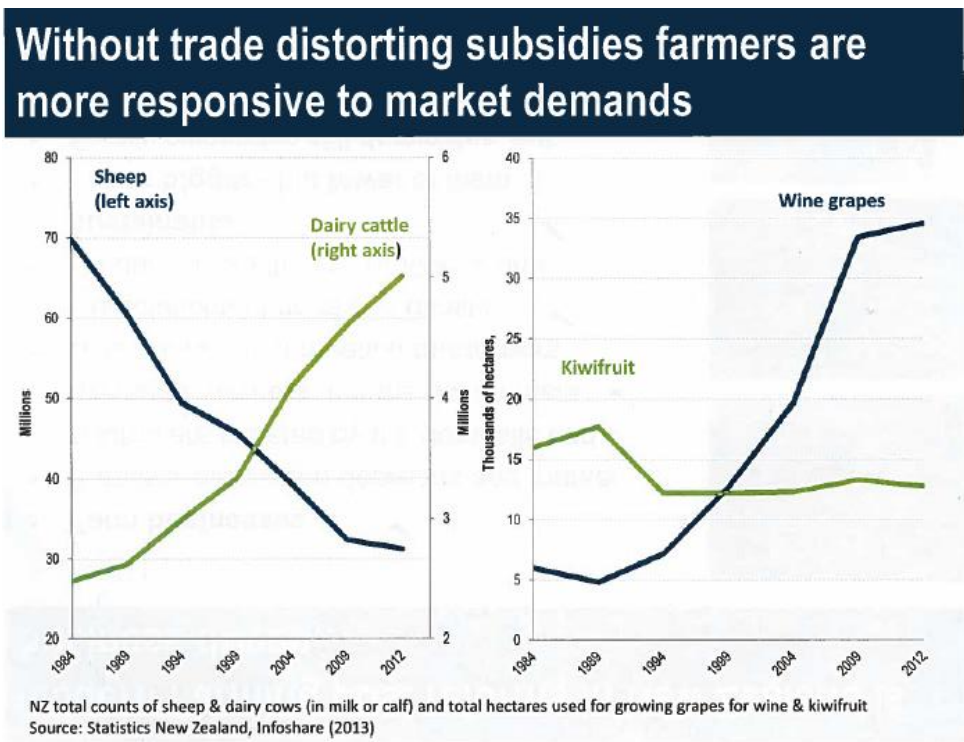


Figure 9. Without trade distorting subsidies farmers are more responsive to market demands

### **3.3 Beef production research in New Zealand**

*Objective 3: Analyse the direction of beef production research in New Zealand.*

New Zealand has seven Crown Research institutes one of which is Ag Research which focuses on research in five main areas; pasture based livestock production, plant breeding, greenhouse gas production, processing and integrating social aspects of food production. Some potential steps being made forwards in beef production include the advances in meat eating quality, particularly in linking to SNP (single nucleotide polymorphism) chips to meat eating quality of individual animals. Alongside this research is advancing in trying to establish and agree the use of meat eating quality sensors to be used in slaughterhouses, currently a primal cut camera is being developed and should ultimately be able to quantify meat eating quality so farmers can be paid on meat eating quality rather than carcass confirmation and fat class.

New Zealand also has a Agricultural Greenhouse Gas Research Centre (NZAGRC) which does not conduct applied research in its own right, however they do co-ordinate all the results from various projects across New Zealand, and beyond, to be able to give an overall picture of greenhouse gas emission reduction. NZAGRC was set up through a primary growth partnership by the MPI and works with all the research organisations in New Zealand including Ag Research and Massey University. At the time of writing the investment was equivalent to £2.4million which is dedicated to developing agricultural emission reducing technologies and practices. Since 1990 there has been a 19.7% reduction in greenhouse gas emissions in beef production (Beef&Lamb NZ and MIA, 2017).

### **3.4 Knowledge transfer**

*Objective 4: Investigate how research and improvements in industry are shared with the farming community.*

From discussion with Beef and Lamb NZ it is clear that knowledge transfer works in a similar way in New Zealand to that of Scotland with one off events, publications and support programmes. An interesting website is the beyond results website which demonstrates some of the primary growth partnerships and projects that have been funded.

Hyperlink: <http://www.beyondresults.co.nz/About/Pages/default.aspx>

### **3.4 Conclusions**

To conclude the findings of this project it is difficult to directly compare beef production in New Zealand to that of the North East of Scotland due to the great differences in length of winter, grain availability and regulation. However Scottish beef farmers and agriculture student could learn a lot in terms of focussing on cost of production, benchmarking and maximising the resources available to you. Greater emphasis should also be placed on meeting market requirements and being consumer orientated. Beef farmers and beef farmers of the future should see their beef enterprises as farm *businesses* and treat them as such. In conclusion, there are differences between agriculture students in Scotland and New Zealand which gives opportunities for learning.

#### 4. Knowledge exchange of project

As part of the project proposal it was always intended that information would be shared with students across SRUC and possibly beyond. The information was shared through a PAN SRUC seminar, a grassland management lecture and through social media posts. The information is also planned to be shared with the SRUC 'grazers' which is an alumni society on the 9<sup>th</sup> January 2019, in the 'NORGRASS' newsletter (a local grassland society that is associated with the British Grassland Society) and with a talk to a local rotary club.

##### **Pan-SRUC seminar – 19/10/17**

A PAN-SRUC seminar was held on the 19<sup>th</sup> of October 2017 via video conference which connected sites in Aberdeen, Ayr, Barony, Edinburgh, Inverness and Oatridge with students and education, research and consultancy staff in attendance. The seminar was recorded and is available through the SRUC website on vimeo (see hyperlinks below – slides visible in appendix 2).



Hyperlink: <https://vimeo.com/240848933>

[https://www.sruc.ac.uk/info/120373/pan-sruc\\_seminars](https://www.sruc.ac.uk/info/120373/pan-sruc_seminars)

##### **Grassland lecture**

The information gathered was also shared in the HND 'Grassland Management' unit for HND agriculture students at Aberdeen.

## **Social Media**

Information was also shared through social media via facebook updates (appendix 1) including written posts, photos and short videos (Appendix 2). The videos, post and photos will continue to be available on the SURC Aberdeen Campus facebook page.

Hyperlink : <https://www.facebook.com/SRUCAberdeen/>

## 5.0 References

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## 6.0 Appendices

### Appendix 1 - Social Media (Facebook)posts and 'vlogs'

**SRUC Aberdeen Campus** Published by Phil Wrigglesworth [?] · 21 August ·

Hello, The Farmers Club Page and SRUC kindly sent me to New Zealand to look at their beef industry, obviously I willingly obliged! Will be posting updates of my visits on here all week. So I started my tour with a visit to AgResearch at their Grasslands Research Centre in Palmerston North (North Island). They are involved in research looking to optimising Beef production from pasture as that represents the majority of beef systems over here. Thanks to Claire and Marlon for hosting me. PS, its Winter over here, supposedly! #Agriculture #SRUC #NewZealand



1,552 people reached

[Boost Post](#)

**SRUC Aberdeen Campus** added 3 new photos. Published by Phil Wrigglesworth [?] · 21 August ·

New Zealand Study Tour Post 2: Today I visited New Zealand's Agricultural Greenhouse Gas Research Centre NZ Agricultural Greenhouse Gas Research Centre, who co-ordinate, collate and distribute research and information on reducing greenhouse gas emissions from ruminants. Really interesting stuff and good to see a coordinated approach. Thanks to Kate and NZAGRC for seeing me. #Agriculture #SRUC #NewZealand The Farmers Club Page



**SRUC Aberdeen Campus** added 2 new photos. Published by Phil Wrigglesworth [?] · 22 August ·

New Zealand study tour - Post 3: Hello, today I visited ANZCO Foods meat processing plants at Eltham and, appropriately named, Bulls (see picture!). Target carcass weights are 320-345kg (a lot lower than ours) reflecting the demand from the market. So most beef cattle used are Aberdeen Angus and Herefords, as they fatten at lighter weights. Could be something to consider in Scotland as weights reduce...? Thanks to Greg and Bevin for hosting me. The Farmers Club Page #agriculture #SRUC #NewZealand



**SRUC Aberdeen Campus** added 5 photos and a video. Published by Phil Wrigglesworth [?] · 23 August ·

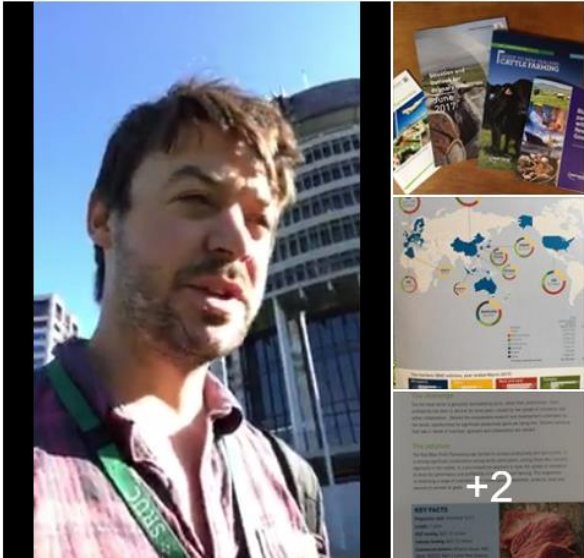
New Zealand study tour - post 4: today I visited Massey University, toured one of their farms (see pictures - thanks to Phil for the 'off road tour'), met the Massey Young Farmers (thanks to James for organising and for the bumper sticker!), sat in on a lecture and spoke with Professor Nicola Shadbolt. Huge thanks to everyone for hosting me, a really great day. Particularly great to see such an active group of young farmers who are doing a lot to help bring people into the industry and to develop their practical skills. The Farmers Club Page #SRUC #agriculture #NewZealand



SRUC Aberdeen Campus added 4 photos and a video. Published by Phil Wigglesworth [?] · 24 August ·

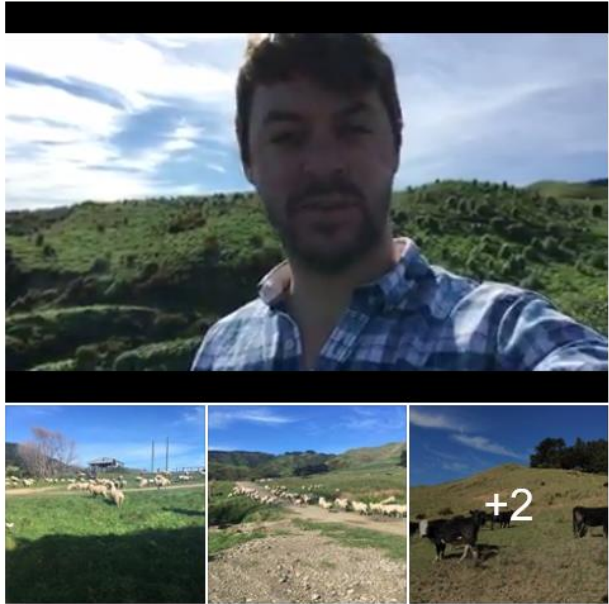
New Zealand study tour - Post 5: today I met with representatives from Ministry for Primary Industries, Beef and Lamb New Zealand and Meat Industry Association of New Zealand. Here are some highlights:

- 👉 The NZ beef industry is worth nearly £1.5 billion of which nearly 90% is exported
- 👉 Biosecurity is the number one topic that farmers want the government to help with (my boots were disinfected when I arrived at the airport!)
- 👉 MPI uses 'Primary Growth Partnerships' to support...



SRUC Aberdeen Campus added 4 photos and a video. Published by Phil Wigglesworth [?] · 25 August ·

New Zealand study tour- post 6: today I visited Whareroa farm about an hour north of Wellington. This is a landcorp owned farm that is partially for amenity use. Otherwise it is a fairly typical sheep and beef farm, take a look! Thanks to Terry from KapAg for meeting with me. The Farmers Club Page #agriculture #SRUC #NewZealand 🇳🇿

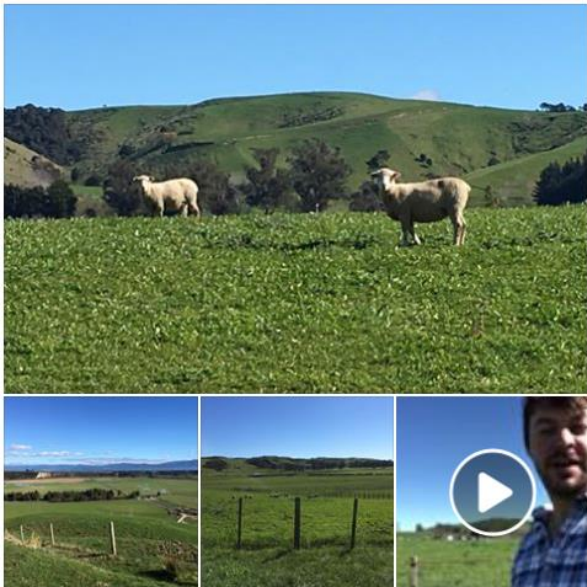


971 people reached

Boost Post

SRUC Aberdeen Campus added 3 photos and a video. Published by Phil Wigglesworth [?] · 30 August ·

New Zealand study tour- post 7: at the end of last week I visited Glen Eden Farms - New Zealand who are part of Atkins Ranch. Ignore my video and go onto their page, they explain it far better than I can!! But an amazing sheep, beef and arable farm, thanks to Mark and Suzie for hosting me! (Ps, I am late posting this due to lack of wifi) The Farmers Club Page #SRUC #agriculture #NewZealand 🇳🇿




SRUC Aberdeen Campus Published by Phil Wigglesworth [?] · 31 August ·

New Zealand study tour - post 8: Last day of my study tour and I met with representatives from the British High Commission, Wellington and visited Taratahi Agricultural Training Centre near Masterton to see how they run their agriculture courses. Thanks to Steve & Rachel for meeting with me from the High Commission and Paul from Taratahi. The Farmers Club Page #SRUC #agriculture #NewZealand 🇳🇿





## Appendix 2. Powerpoint delivered for PAN-SRUC seminar


  
SRUC

# A study tour of New Zealand Beef Production Systems – How do they cope without subsidies?!

Phil Wigglesworth

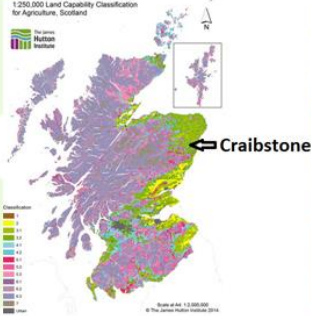
*Leading the way in Agriculture and Rural Research, Education and Consulting*

1


  
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## Craibstone

1,250,000 Land Capability Classification for Agriculture, Scotland




← Craibstone




2

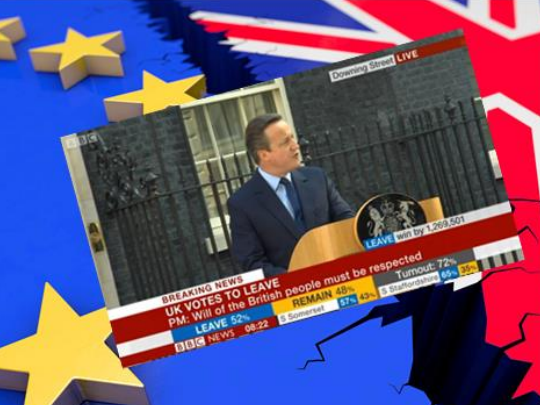
## Farmers Club Charitable Trust

  
SRUC

- "Promote the science and technology of agriculture in all its aspects for the public benefit"
- Bursaries available for lecturers at UK based Agricultural Colleges & Universities
- Aim to widen and develop technical expertise



3



4



5



6

## NZ at a glance


  
SRUC

- Total population of 4.6million people (2016)
- 13.9 million ha of Agricultural land (2015) (1/3 of total land)
  - 7.8m in grassland
- 44% of farms mainly sheep and beef (2012)
- 3.5 million Beef Cattle
  - 38% Angus, 12% Angus x Hereford, 10% Hereford
  - 1 million breeding cows and heifers
  - 71% in North Island



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## NZ at a glance

  
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- 2<sup>nd</sup> largest honey exporter
- 2<sup>nd</sup> largest log exporter
- 3<sup>rd</sup> largest wine exporter to the US by value
- 1% of arable production exported
- 77% of UK lamb imports by volume and 79% of UK lamb imports by value
- 35% of global dairy exports
- Produces ½ carrot and radish seed

8

Ministry for Primary Industries  
Manatū Ahu Matua

agresearch  
the real, not the ideal

beef-lamb  
the real, not the ideal

Massey University ANZCO FOODS

Vlogging!

SRUC Aberdeen Campus visited a photo and a video

New Zealand study tour - Part 5: today I met with representatives from Ministry for Primary Industries, Beef and Lamb New Zealand and Meat Industry Association of New Zealand. Here are some highlights.

- The NZ beef industry is worth nearly £1.5 billion of which nearly 90% is exported
- Biosecurity is the number one topic that farmers want the government to help with (my books were confiscated when I arrived at the airport)
- MPI uses Primary Growth Partnerships to support...

Ministry for Primary Industries  
Manatū Ahu Matua

- History of 1970-80s
  - Aimed at increasing production for export through government support
  - 40million lambs produced – market for 24million...
  - Large numbers going for rendering
- 1984 - Removal of subsidies overnight
  - Rural Debt write off programme
  - Exit package
  - Aimed at ensuring the market and regulatory environments allow agriculture to operate efficiently and profitably in response to market signals
- 2017 - Beef industry worth £1.5 billion
  - 93% exported
    - Makes no sense to subsidise!

How did/do they do this?

Farm businesses

Glen Eden Farms - New Zealand

Greater Wellington region farmers get yourselves a farm environment plan from the land management team. We've found it a really handy tool.

Eco farm plans are paying off - Times Age

Mark and Susannah Gossell began their wetlands project about six years ago, and are proud of the progress. PHOTOGRAPHY: WILSON BROWN. VIDEO: BECKIE VILSON@age.co.nz. Many things in life can get pushed aside with the...

Market driven

Grain is expensive

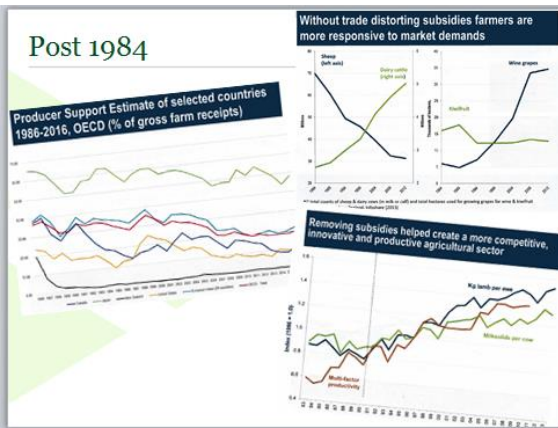
↓

Make the most of the ground and season

Efficient, profitable and sustainable

- Cell and rotational grazing widely adopted
- Performance recording and benchmarking
- Beef farmers = retired dairy farmers

Global outlook and customer focussed



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### Cost to the environment..?

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- Water pollution issues
- Weed control
- Green House Gas Emissions
- Desire to return land to native bush

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Ministry for Primary Industries  
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### GROWING AND PROTECTING NEW ZEALAND

OUR AMBITION  
New Zealand is the most trusted source of high value natural products in the world

OUR OUTCOMES

- Growth
- Sustainability
- Protection
- Participation

OUR PRIORITIES

- SAFE & SOUND
- MARKET LEADERSHIP
- INTEGRATED PRODUCTION
- RESILIENT PRODUCTION
- LEADERSHIP
- NEW ZEALAND

WE DELIVER THROUGH STEWARDSHIP OF OUR SYSTEMS

- Policy – advisors
- Operational – food safety
- Enforcement – biosecurity
  - #1 issue for farmers
- Investment – PGPs
  - Alternative to subsidies?

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Primary Growth Partnerships

Ministry for Primary Industries  
Manatū Ahu Matua

SRUC

### MARLBED GRASS-FED BEEF

RED MEAT PROFIT PARTNERSHIP

### FARM<sup>SM</sup>

KEY FACTS:

- Programme start: 2015
- Length: 5 years
- Ministry funding: \$1.2 million
- Industry funding: \$1.2 million

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### 'Clean and Green'

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mia  
Meat Industry Association

beef+lamb  
New Zealand

British High Commission  
Wellington

- Focus on Markets
  - Selling cuts not carcasses
  - Customer focus – Halal (25% or market)
  - Grass fed as premium product
- Enabling Legislation
  - Industry VERY involved
  - Aim to be outcome focussed
  - But... cost of farming VS Environment
- Greater focus on research
  - Fodderbeet finishing?
  - Ryegrass with higher fat% to ↓GG?

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agresearch  
āta mātai, mātai whetū

SRUC

- Focus on:
  - Pasture based livestock Production
  - Plant species
  - Greenhouse gas emissions
    - ~1% ↓GHG emissions/yr since 1990
  - Processing
    - MEQ
  - Integrating social science
    - Agricultural options in schools
    - Leadership courses for Young Farmers

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ANZCO FOODS

SRUC

### Processing

- Muscle graded
- Fat class 'measured'
- Aberdeen Angus premium
- Hot boning (4%+ yield, 5% in bulls)
- EID cattle
- Average carcass weight 245Kg (bulls 300Kg)
- Teeth for aging heifers

Weight (kg)	L2	T2	F2
148.0 - 159.9	\$4.25	\$4.30	\$4.30
160.0 - 179.9	\$4.25	\$4.30	\$4.30
180.0 - 199.9	\$4.25	\$4.30	\$4.30
200.0 - 229.9	\$4.55	\$4.60	\$4.60
230.0 - 249.9	\$4.85	\$4.70	\$4.70
250.0 - 279.9	\$5.00	\$5.15	\$5.15
280.0 - 299.9	\$5.00	\$5.15	\$5.15
300.0 - 329.9	\$5.05	\$5.10	\$5.10
330.0 - 349.9	\$5.10	\$5.15	\$5.15
350.0 - 379.9	\$5.00	\$5.10	\$5.10
380.0 - 449.9	\$4.80	\$4.85	\$4.85
450.0 - 479.9	\$4.40	\$4.45	\$4.45
> 479.9	\$3.80	\$4.00	\$4.00

Beef Levies

- Dairy Slaughter Levy \$ 13.00
- Beef Slaughter Levy \$ 6.30
- NZ Beef & Lamb \$ 4.40
- ASSURE Insp. Fees \$ 19.75
- NAIT Tag Levy \$ 0.50

Lamb & Mutton Levies

- NZ Beef & Lamb \$ 0.90
- ASSURE Insp. Fees \$ 1.90
- ASSURE Insp. Fees \$ 2.50

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Massey University

SRUC

- Young Farmers group
  - "Surely subsidies would lead to inefficient farming...?"
- "How can legislation enable farmers to change?"

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## Conclusions



- **New Zealand is different from Scotland!**
  - Cannot directly compare production systems
  - But we can learn a lot from NZ beef farmers



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## Where do we go next..?



- **Focus on profitability, efficiency and sustainability**
  - Lighter weights, move to native breeds...?
  - Make better use of grass
- **Farming is a business**
- **Be market driven**
- **Global outlook and customer**
- **As for subsidies...?**
  - Mental Health
- **Threat from synthetics...?**



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## One last conclusion



An 8hr flight followed by a 17hr flight with a 10month old baby is hard work!

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