# Stoking Secondary School Students' Interest in Primary Industry Studies

## Kellogg Rural Leadership Course 2015

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# CONTENTS PAGE

1.0 Abstract……...2

2.0 Introduction……3
2.1 Background……... 3
2.2 Objectives……...5

3.0 Literature Review…….. 6
3.1 “A look back” (review of previous Kellogg projects on a similar topic)…… 6
3.2 – National Literature Review ……. 8
3.3 – International Literature Review……...10

4.0 Methodology……...12
4.1 –The Process…… 12
4.2 – Interview Questions…….. 13
4.3 – Sample size and demographics…….....14

5.0 – Research results…… 15
5.1 – Analysis & Discussion of the Interviews…… 15
5.2 – Surprises…… 21
5.3 – Considerations & Limitations…….. 22

6.0 –Recommendations to the industry
6.1 - Rebranding Agriculture & Horticulture school subjects……23
6.2 – Introducing a Rural Taster Course……23
6.3 – Better Utilisation of Social Media……23
6.4 – Parental Engagement using Individual Development Plans……...23
6.5 - Development of an Auckland based Primary Industry Tertiary course…….23

7.0 - Further Work…….....24

8.0 – Conclusion…….. 25

9.0 – References…… 26

10.0 APPENDIX
10.1- Interview Questions…… 27
10.2- Acknowledgements…….. 30

## Abstract

The primary industry is known as the backbone of New Zealand's economy, with large amounts of exciting and broad career opportunities. Yet as the population grows many graduates prefer to head to urban based careers in large cities, than return to heartland New Zealand and take up careers in the primary sector.

The qualitative study reported here explores what career advice is been given to our future generations regarding the primary industry, what knowledge careers advisors have of the opportunities available, and finally what stigmas/barriers there are preventing students undertaking a primary industry career.

Most schools do promote careers in the primary sector however this could be one specific career such as vet, and most admitted they don't do it well and could do it better. The overall feeling was careers advisors knew there were a broad range of careers opportunities available in the primary sector, however there knowledge of specific jobs was average. The main stigmas associated with the primary industry were seen as Agriculture was for 'dummies' and the work was too hard.

Strategies to help the promotion of primary industry jobs, include rebranding agriculture in the school curriculum to something more 'sexy' and to introduce a one semester taster course at year 9 & 10, followed by an NCEA paper to compliment. Also the industry needs to do better to harness social media as a career selling tool, especially in Auckland.

## Background

The primary industries in New Zealand employ 350,000 people and account for one in six jobs nationally, and in some regions one in three jobs. (MBIE Occupation Outlook 2015)

The New Zealand Government has set a lofty goal to double our exports from primary industries by 2025 to $64 Billion (MPI Statement of intent 2014-2019). This goal is reliant on a number of factors including demand for food in the world increasing by 45% on current levels, mainly in Asia and developing African nations.

The Ministry of Primary Industries (MPI 2014-2019) noted that in order to double exports by the year 2025, the primary sector will need at least another 50,000 people employed, with over half of these tertiary qualified.

However the Ministry of Business Innovation & Employment (MBIE) has stated in their 2015 Occupation outlook that by 2025 the primary industry will require an additional 92,600 workers, all with a qualification. Based on current employment growth predictions of 1.1% per annum in the primary industry through to 2025, there will be a large shortfall at current rates of change.

Currently according to statistics from Dairy NZ, there were 99 Graduates in 2013 with an Agricultural based degree. This is compared to 186 graduates with a Drama based degree in the same year.
While there are some graduates from other lines of tertiary study that move into the primary sector after graduation, there is still a large gap to be bridged between the current number of Primary sector graduates and the number required to fill jobs in the next 10 years.

This is further increased by the current rate of urbanisation in New Zealand, and the predicted population shift to Auckland over the next 10 years.
In the last 10 years 51% of New Zealand's Population growth has been in Auckland, despite it only accounting for 34% of the total population (Auckland City Council 2013). According to an article by Dr Ganesh Nana in 2014 much of New Zealand's economic incomes, come from resource based activities located in heartland areas that are depopulating. In order to attract people to these so called heartland areas, the key lies in attracting urban secondary school students to the opportunities available in the primary sector.

Personal Background

I was born and raised on a 360 cow dairy farm in North Taranaki, New Zealand. The property initially milked around 120 cows and over the years steadily expanded through the purchase of neighbouring property to reach the 360 cow size it is today. I attended the local Lepperton Primary School, a rural settlement approximately 15minutes from the city of New Plymouth. I then attended Highlands Intermediate in New Plymouth, before going on to attend New Plymouth Boys High School, the largest boys school in Taranaki. This school however does not offer an Agriculture subject, but does offer a Horticulture course.

During my time at this school, I was considered an accelerated pupil, and because of this was steered towards careers outside the primary industry. I was told numerous times by

teachers that I was “too smart” to be a farmer. I was not deterred by this and on completing my secondary school training, headed south to Lincoln University to complete a Bachelor of Commerce in Agriculture, with majors in Farm Management & Rural Valuation. This is where I met many similar like-minded individuals, the majority of whom had come from a similar background to me. However there were still peers at Lincoln who had come from non-rural backgrounds, and I was interested to learn that they had developed there interest from Agriculture Based classes in their secondary schooling. This was the first I had heard of being able to take Agriculture as a secondary school subject, and sparked my interest as to why my school had not offered this course. Since then I have been passionate about what our industry has to offer and the career opportunities within it. On getting the opportunity to complete a Kellogg course this year, I immediately knew what line of study I was going to pursue. Getting Secondary school students interested in the primary industry early on, I believe is the key to the primary industry continuing on a successful path, and meeting the future staffing requirements of the industry.

Since Graduating from Lincoln University in 2009, I have been employed with Farmers Mutual Group (FMG) in various different roles and locations. FMG is a rural based insurer, who specializes in understanding and meeting the risk management needs of rural New Zealand.

I am currently employed as the Business Development Manager for Taranaki, based in New Plymouth.

## Objectives/Goals

Study Questions

The purpose of this project is to discover what career advice is been given to our future generations regarding the primary industry, what knowledge careers advisors have of the opportunities available, and finally what barriers are preventing students undertaking a primary industry career.

These three key questions will form the basis of my research project.

Objectives

Heading into this research project there are three main objectives that I wanted to achieve as part of the Kellogg course and my project topic.

- Improve awareness of the great career opportunities available to secondary school students in the primary industry
- Provide some solutions to the Primary Industry on how to generate interest in the industry at a secondary school student level, so more academic minded students are entering the industry.
- Develop support to introduce a primary industry focused subject or Agriculture class at my local high school New Plymouth Boys High.

Goals

The goals of this project are to:

- Explore and area I am interested and passionate about, however don't know much about
- Stretch myself to complete a research project, which is something I have never done before
- Contribute some ideas to the primary industry on how we as an industry are going to meet the human resource element of the lofty goals set by the New Zealand government.

## “A Look Back”

**Barbara Kuriger “Perceptions of a career in the dairy industry” Kellogg Course 2001**

Kuriger (2001) looks at the perceptions of secondary school children on a career in the dairy industry. The key issue the research addresses is that the dairy industry is struggling to attract enough staff to fill vacant positions on farm. The research project revolves around a survey of secondary school pupils in Taranaki and asks them a range of questions based on the dairy industry. A real strength of the research is the number of survey responses she received from secondary school students, which increases the accuracy of the research.

The key recommendations to come out of Kuriger (2001) research are;
- that we are failing to get information to students and not working the best with careers advisors on identifying the opportunities available in our industry.
- break down the barriers that are creating the so called ‘stigma’ around Agriculture.
- create more incentives for students to enter the rural industry.
- Aim at the target market, which identified in the research as the 30% of students who are yet to make a career decision.
- Obligation for rural industry businesses to be ‘good employers’.

I will address some of these factors in my own research to determine if anything has changed in the last 15 years.

Some limitations of the research are that it was conducted only in the Taranaki region, where dairy farming is one of the key contributors to the local economy. I have factored this into my own research because of that and will survey Careers advisors from the city of Auckland to and compare their views to that of the Taranaki Region.

It is noted since Kuriger (2001) completed her research project the careers advisors have changed in 11 out of the 13 Taranaki schools. Given this factor my research will add a more recent insight.

On discussing the research with Barbara herself, the following insights were gained. The thing she enjoyed most about the project was going around the schools and meeting the students. Following each survey she had an opportunity to promote the industry which she enjoyed. The biggest surprise to her was the survey response and the amount of data she gained out of it. Barbara was really satisfied with her project and would not have changed anything. Her only improvement was that the research had not really been followed up and the issues identified addressed. Barbara believes that in 2015, the industry needs to provide more opportunities for secondary students to “go and have a look” at the opportunities in the sector and also having “real” case studies in the mainstream curriculum. (E.g. pasture management as a mathematics question)

**Bron Muir "The Future Face of New Zealand's Rural Industry" Kellogg Course 2010**

Muir (2010) discusses the issue in New Zealand Agriculture of many of the staff at an "on farm' level lacking basic numeracy and literacy requirements required or expected by their employers. The report also touches on the perceptions or careers advisors/school students and farm workers & owners on the level of academic achievement required for a rural career.

The theory behind the project is that currently the individuals been attracted to the dairy industry are the students who lack basic academic skills and create the stigma the "agriculture is for dummies"

What has not been included in the study is a look at other parts of the rural industry. The report focusses on the Dairy industry at an on farm level, which is very appropriate for Taranaki, however my report will focus on the primary industry as a whole. I believe this is a better angle to approach it as there are a lot more opportunities outside of milking cows.

The method used in the report was a questionnaire or interview of five main target groups. The groups involved were – Two rurally proactive secondary school teachers

- Two non-rural secondary school teachers
- Current secondary school students aged 16-18
- Farm employees
- Farm owners or Managers.

The key messages to come out of Muir (2010) were the lack of cohesion amongst rural providers, means that schools get a range of contradicting information on the rural industry. A key finding was also that the majority of farm workers/managers and farm owners were attracted to the industry because they wouldn't need the basic academic skills to succeed. However with many current farms been multi-million dollar businesses, the modern day farmer needs a range of business/human resource/IT and other skills to complement their farming knowledge to succeed.

The strength of the report is definitely the wide range of target groups which provide a great insight to the industry from teacher/student through to farmer. The way Muir (2010) have adjusted the survey to each group is also well done. One improvement could have been with the school kids and 75% who only completed the first section. It would have potentially been an interesting insight to divulge why these 75% were not considering a rural career. I have utilised this learning and looked at in my own survey the things putting kids off the rural industry and also parental influence which is touched on in Bronwyn's project.

One limitation of the report is again the focus on the Taranaki region, which due to the influence of the rural industry has the potential to be bias. Again by bringing Auckland careers advisors into my own study, I hope to alleviate this bias and get a broader insight.

Bronwyn's own thoughts on the project when interviewed by the author around the project were that she really enjoyed the challenge and presenting her findings to the industry. She felt at the time she lacked the influence to really push the findings in the project, however now as Federated Farmers Taranaki President she is in a better position of influence to get

some traction. If she had the opportunity to do the project again, she would pick a subject she knew nothing about as this would eliminate any bias going in. Personally she believes now in 2015 to get more students into the rural sector, we need to be reaching our kids at a younger level (year 7 & 8) and be more strategic and smart as an industry rather than leaving it up to others to sell our industry.

## National Literature Reviews

"Agriculture Education & Training in New Zealand" I. Knowles (2010)

Completed as part of a Nuffield project this research looks at the present state regarding Agriculture Education and Training (AE & T) in New Zealand. The report also discusses some options for future education models and how organisations should amalgamate to deliver a collective vision.

The main problem formulated (study question) is the current AE & T structure is not meeting the current needs of our industry. This is relevant to my own research as 5 years on, very little has changed and we are still struggling to find enough skilled employees locally to fill the required roles in our industry.

An interesting argument that develops in this research is the comment that when New Zealand's AE & T is compared to that of other countries, we are around a decade behind. The big factor noticed was the more streamlined process where-in New Zealand organisations compete against each other with a range of different brands, courses and overall outcomes.

Knowles 2010 provides some interesting statistics relating to my own study in that even though we are getting growth in the number of students taking up an Agricultural based course, those increases are at a secondary school level or NCEA level 1 to 3, rather than a higher level. The numbers of students taking Agriculture at a diploma or degree level has actually diminished. Part of my project is to establish why these students are happy to only achieve a lower qualification, rather than taking their learning and development to a higher level.

Knowles 2010 provides a very good overview of the countries visited during the research, however the information is brief and it would have been interesting to drill down a bit more in depth to find out more about what these countries are doing different.

One limitation of the research is the lack of quality references, which makes it hard to go and find 'more info' on certain aspects of the project.

Overall the report provides the author of this research project with a good overview of the current AE & T setting in New Zealand. One big takeout regarding my own research project is the recommendation at having secondary school programmes like STAR & Gateway aligned under the one brand. However I believe we need to go further than this and make primary industry studies a part of the curriculum.

“Vocational Pathways: using industry partnerships and personalised learning to improve student outcomes” E.P Harrity (2013)

This research looks at the issue of post-secondary education and training, and how the New Zealand Government is developing Vocational pathways to help more school kids obtain NCEA Level 2 before they leave school. The research looks at the five different vocational pathways of social and community services, manufacturing and technology, construction and infrastructure, service industries and primary industries. This pathway has come about due to the diverse needs of modern students and also employers who have seen a disconnect between what skills they are developing at secondary school and the skills needed to succeed in the workplace.

The research is an analysis of how the vocational pathways idea has so far been implemented and provides some recommendations to further develop this program. A key factor to come out of the research is that there is a lack of clear guidance and expectations which are making it difficult for schools to implement.

A good aspect of the research is where the author identifies what aspects of the program continually need to be revisited in order to keep the programme strong and does this by posing three questions. However some relevant examples of these aspects would have strengthened the argument.

The research lacked individual case studies of schools who had implemented the program, which was identified by the author as something required for further research. A different angle may have been followed with the research if a successful program was compared and contrasted with one that was not so successful.

In terms of bringing this research back to my own, the vocational pathways idea is proving successful in some of the schools interviewed, and is certainly helping to promote the rural industry at an ‘On farm’ level. However this is only one aspect of the industry and the vocational pathways program is seen in schools interviewed with the exception of one as a pathway for the less academic students. This is in contrast to research from overseas countries such as Finland where the vocational pathways is taken up by nearly 60% of all high school students and on completing this many can still go to university (Fullbright 2015)

The vocational pathways model still like anything needs to generate interest in the chosen pathway for it to be successful. Therefore as part of my research interview, questions were posed around pathway or industry taster courses at a year 9 and 10 level, which could generate more interest in a career in the industry.

This research was relevant to my study as it covers off the question posed that the skills students are leaning at high school are no preparing them for the ‘real world’ and this is confirmed by perspective employees. By providing more industry specific subjects at an earlier age, students can start there pathway learning skills that is beneficial to them and a future employer.

## International Literature Reviews

"Agricultural Education in an Urban Charter School: Perspectives and Challenges"
(K A Henry, BA Talbert, PV Morris - 2014)

The selected literature discusses the benefits and challenges of expanding High School Agricultural education programs into urban (city) high schools, with the main benefits noted as been an increased awareness among urban students and more recruitment opportunities for higher education. The study focuses on non-traditional schools, specifically charter schools due to these schools having more flexibility around their curriculum.
The two main research questions that guided the study were based around how teachers viewed the inclusion of Agricultural science papers in an urban school curriculum, and what challenges these teachers faced when delivering and agricultural based course. The research is carried out using a qualitative approach, which is the same approach I will be using for my own research.
One of the key findings of the research is the belief that inclusion of Agricultural Education courses into the mainstream curriculum played a major role in breaking students 'stereotypes' regarding agricultural careers and making them aware of higher education opportunities in agriculture and related fields. This is related to my research, around breaking down the stigma related to agriculture in New Zealand.
The research also identified that by introducing students to agriculture; they had a better understanding of where there food comes from e.g. not the grocery store and also increased their global awareness. This provided students with good practical knowledge and understanding regardless of whether there career went down an agricultural one or not. This is an interesting concept as it gives weight to a rural taster course discussed further in this project, and how the benefits extend past just the rural industry.
The research looks at one specific charter school in an urban city in the United States. Therefore this does restrict the research paper and expose it to bias as both the study size (1 charter school) and the sample size (3 teachers) are very small especially in a country as large and diverse as the United States. In my own research I have tried to minimise this bias by interviewing careers advisors/teachers from both a provincial area in Taranaki and a very urban area in the city of Auckland.
However an aspect of the research that was very good was the data collection period was over a 4 month period where the researchers were immersed in the school during this period. Due to time constraints a similar study was not possible for this research.

Overall the research paper is very good at identifying how Agricultural stereo types can be broken and also how inclusion of the subject in urban schools can increase enrolment at universities and colleges. However the data is very limited and from an extremely small sample size, which has potential to create bias. Further research is required to determine if the introduction of an agricultural related course does increase the number of students taking the subject on at further education. The research provides good ideas around a rural taster course proposed in this report and how the benefits could be far more reaching than just the primary industry.
A good example of potential future research on this topic is Mount Albert Grammar in Auckland, New Zealand. They are currently developing their 8.1 hectare school farm, into a cutting-edge educational facility that showcases the best in innovative agricultural-tech developments including environmental best practices and practical training, with a focus on

balancing agricultural productivity with future sustainability (Scoop 2015). I will be watching this with interest as it develops, with plans to put 25,000 school students through each year.

"Factors influencing career Choices of Adolescents and Young Adults in Rural Pennsylvania" (N.M Ferry – 2006)

The research is a qualitative study that explores the key influence factors rural high school students' face in the career choice process. The project is used to identify what themes are present and then looks at some solutions to overcome.

The method used was that of a focus group. This was considered for my own research, however due to time constraints it was not used as an option. This project found the method to be very good at getting participants to provide information without being directed to answer specific questions. However a limitation of this is that certain members of the group can be influenced by others in the group meaning only a select number of opinions are actually gained. I have mitigated this by having 1 on 1 interview as an alternative.

Key findings from the research was Interdependence of family, school and community culture, the perceived 'ideal job' and out migration from the rural areas due to income and job opportunities. This last factor can be compared to the New Zealand setting where more and more rural kids, are migrating to the cities.

The key factor to come out of this relevant to my own study is the key role that family, and in particular parents play in the students overall career choice. Parents were found to have key roles through educational expectations and what they perceived of occupational appropriateness. Parent engagement is something I will look at discussing in my research project, as it will be interesting to see if careers advisors believe the influence of parents is similar to this study. Another aspect of this is that the parent influence was higher in more affluent areas, which is an interesting observation.

Overall the research is very specific to a rural state in America and provides a good insight to the influences young people have on an overall career decision. However the method of interviewing does carry some bias in a focus group, and there is not a lot of background information on why the study is been undertaken and the theory behind it. The report does however provide me with some direction for questions around parental influence in New Zealand schools and how schools engage with these parents regarding their son/daughters career choice.

# Methodology

This section of the report looks at the reliability and validity of my methods used in the research project.

## The Process

The technique I have opted for in carrying out my research is through a non-probability sampling method. The non-probability method that I have chosen as the most appropriate for my research is Purposive or Judgemental Sampling. The reason I have selected this type of sampling method is due to the small sample size of careers advisors available and the time constraints. I determined this to be the best method to identify key themes in careers advice and meet my objectives. For the purposes of the research the sample size used was 18 careers advisors, 10 from Taranaki and 8 from Auckland.

As part of that process, the purposive strategy that I adopted was homogeneous sampling, which enables me to collect data to describe and explain the key themes that are observed. (Patton 2002). Homogeneous sampling also focuses on one particular sub group, which in this case are the careers advisors in Secondary schools in both the Taranaki & Auckland regions.

The approach I took was to develop a basic interview to conduct with careers advisors. After developing this interview I then tested it on a local careers advisor (pilot survey) and made some adjustments accordingly.

During the undertaking of my research study there were a number of ethical issues that I had to keep in mind. The key aspect where these arise was during the contacting and interviewing of the careers advisors. I was careful not to apply any pressure for them to complete the report and stressed that all results would be confidential. I also structured my interview questions, so that individuals could not be identified on individual answers. When reporting the results no names of individuals or schools were used. The only use of names would be at a regional level where Taranaki was contrasted with Auckland or if individual opinions were used, they were referred to as Careers advisor A for example. Participants were also advised at any stage in the interview process that they did not need to answer a question if they did not feel comfortable.

Another key ethical issue I had to keep in mind during the report was during the interviews and maintaining objectivity. This means that during the interview I had to record all data obtained fully, and not be selective in what Information was recorded (Lewis 2009). This was important as it ensured the information reported in my work is accurate and unimpaired. I can also guarantee that none of the data reported was in anyway fabricated.

## Interview Questions

Instructions that were given to the participants were that I was completing a research project based on the views and opinions of careers advisors in Taranaki and in Auckland. I identified myself and the course I was completing. I avoided going into in depth chat about the rural industry until after the interview had been completed in order to minimise any bias to the responses from participants. This was identified as a successful method as a number of participants identified that they would have had different answers to some of the questions following discussions outside the interview afterwards.
My interview questions were broken into 3 main sections. The intention of my survey was to generate discussion through the use of predominately open ended & probing questions that would be effective in a 1 on 1 interview as well as group discussions. The result was a semi structured interview that worked well for collecting the qualitative data required for this project. A full list of the questions used and the theory behind each question can be found in Apendix 1.

The first section covered off general careers queries from students as well as collecting some information for demographical purposes. The second section was rural based questions around the current situation in New Zealand schools and the promotion of the rural industry. The third section looked at what a rural student looked like to a careers advisor and some questions to create discussion around ideas of better promoting the industry.

The majority of the data collected not for demographic purposes was Qualitative data. Therefore the data was analysed using a mixture of an inductive and deductive approaches. In the absence of computer aided qualitative data analysis software (CAQDAS) I have interpreted and grouped the results manually. The basic process I followed was to summarise the key points from each interview question and then explored the themes that came about. I have then discussed my own opinions formed on the basis of the results.

## Sample Size and Demographics

For the purposes of this research I interviewed 10 Careers advisors from the Taranaki region and also eight from the Auckland region were interviewed. The reason for this is that Taranaki is a predominant rural community with over 25 per cent of jobs in the primary sector and nearly 40% of all businesses (Taranaki Industry Projections 2006-2026 – D. Norman, G. Nana, J.L. Leung-Wai (2007)). Therefore there is a chance of bias towards the rural industry and as such, contrasting this with the opinions of Auckland careers advisors would be an interesting exercise. Auckland also is having the greatest population growth accounting for 51.7% of New Zealand's total population growth in the last 10 years, despite only having 34% of the total population (2013 Census, Auckland City Council), which also means this along with immigrants is likely to be the target market for employees for the rural industry moving forward.

With the 18 interviews that took place, these varied in length from 20 minutes to nearly an hour. These interviews took place in person for 80% of the Taranaki careers advisors, however due to time and travel constraints 100% of the Auckland interviews were done via phone interview.

Of the 12 careers advisors in Taranaki I contacted regarding the interview, 10 were more than happy to partake, giving a response rate of 84%. All the non-respondents were not included in the study

Of the 10 interviewed four were male careers advisors and six were female. Their experience in a careers related role ranged from less than 18 months to over 20 years.

Of the 20 careers advisors contacted in Auckland only eight were happy to take part, giving a response rate of 40%. Of the eight interviewed, five were female and three were male. The Auckland careers advisors experience ranged from five years in the job to over 15 years' experience

Overall I believe my methods and procedures were very reliable and provide a good snapshot of the current situation regarding promotion of careers in the rural industry.

## Research Results

This section looks at the responses from the interviews undertaken with careers advisors and the perceptions gained. In addition there is analysis of these responses and opinions formed.

## Analysis of the interview(s)

Section one of the interview looks at general careers queries from students as well as collecting information for demographical purposes

The question was posed around what year careers advice began in schools for pupils. The majority of schools started careers advice at year 10 level, with the next most common at year 9 level. Two schools started at year 11, however both commented that their strategic goal was to move it to the year 9 level. There was no difference between the Auckland and Taranaki Schools with most sharing a common theme.

When interviewed on their background relating to careers qualifications, 100% of the Auckland careers advisors had a careers based qualification, however only 40% of the Taranaki Careers advisors had a careers based qualification. This was interesting and it appeared that this had no actual bearing on the advice given by the advisor or the skill of the advisor, more so that the qualification was more accessible to the Auckland based advisors as one of the courses was taught at the Auckland University of Technology (AUT). Many of the Taranaki advisors also had no incentive to gain the qualification, as they had either been in the role for a number of years, it was not a requirement of the role or they had higher qualifications from previous careers. A solution to this would be to provide more accessible training to our careers advisors, and an incentive to complete the course such as subsidised costs for courses.

The top questions posed by school children to careers advisors in Taranaki were;

'*What am I going to do when I leave school?', 'What jobs I can get from this degree?' and 'what subjects I need to take to get into my chosen career?'*

These questions that are been posed to careers advisors show that a large number of school aged children are coming to the careers advisors for very important advice on their futures. It provides an opportunity I believe for our primary industry to sell ourselves in a positive way and also for our rural training providers to do a better job of selling the courses based on the expected job options at the end of the course.

The top questions posed by Auckland school children that were different from the above, were *'How do I get into medicine, engineering, accounting or law?*'

This question was mentioned by six out of eight careers advisors in Auckland, and shows the focus on these careers is very dominant in this region. This was especially so in the Asian community where one of these roles was seen as successful to their family and failure to go down this track they can be shunned from the family.

The subject of parental influence had two questions based around it where careers advisors were asked how much influence they believed parents had on the student's career choice, and how they engaged parents in the career advice journey. The figure 1 below shows how they scored the influence out of 10 with the average score across all 18 careers advisors of 7.6.

| Influence Rating | Number of Careers Advisors |
|---|---|
| 1 | 0 |
| 2 | 0 |
| 3 | 1 |
| 4 | 0 |
| 5 | 2 |
| 6 | 1 |
| 7 | 4 |
| 8 | 3 |
| 9 | 3 |
| 10 | 4 |

Some interesting comments to come from careers advisors were:

- Higher decile school students tend to have more influence from parents than lower decile school students.
- Asian students in particular have a 10 rating in terms of how much influence is put on them by parents or caregivers.
- Cultural and family reasons for career choice often not discussed but are underlying with students.
- Auckland school students don't want to leave Auckland.

The results of how parents were engaged by schools, varied across both regions, which showed there is no consistent approach used in our education system, and came down to each school individually. Engagement ranged from none at all where parent involvement was totally voluntary for the parents, right through to individual development plans (IDP) for each student, with parents required to attend meetings with the students regarding the IDP. However with the IDP plans, these were carried out by teachers rather than careers advisors.

Careers advisors were finally asked in this section what career options they were aware of in the primary industry. The results of this question were pleasantly surprising with the majority of careers advisors having a broad knowledge of careers available in the industry. The careers that had the highest awareness were the on farm roles, along with science based research and service roles such as rural banking. The careers advisors who didn't have a great understanding of the careers available, all admitted this and were open to finding out more. It was noted that on further conversations, knowledge of individual roles was very brief; however the majority of advisors were able to source information on roles if required.

The second section of the interview looked at how rural careers were promoted in the individual schools. This section also asked what information was received from industry and assessed the quality of this information.

Out of the 18 schools interviewed 16 identified that they actively promoted primary industry careers. One school in Taranaki who said they promoted it identified that this was something they did not do well, and was more of a student lead innovative. The rest of the schools had varying levels of promotion and utilised different techniques.

The two schools identified who did not promote jobs in the primary sector were both based in the Auckland region. The advisors identified that they did so for two main reasons. Firstly the believed their school was academic based and would not warrant promotion of such careers at the moment and students were simply not interested in leaving Auckland for further training. They identified it as too much of a hard sell, but were 'chipping away'. The second reason was put down to a lack of resources combined with a focus on other careers paths due to the large Asian population in the schools. This was disappointing to me, as the primary industry is in need of more academic based students taking up careers in the industry. I believe it comes down to a lack of knowledge and education of both the schools and the parents involved in helping run them towards the career opportunities available in the primary industry. It also showed how little influence careers advisors often have on the schools who employ them.

How primary industry careers are promoted in schools is through direct and in direct methods. The most common methods for promoting them seem to be:

- Allowing universities and industry bodies such as Fonterra or Dairy NZ opportunities to speak to school students.
- Offering an Agriculture or Horticulture subject. (mostly at NCEA Level 1 only) Only around 50% of schools interviewed offered an Agricultural course in Taranaki and 0% in Auckland.
- Through STAR & Gateway courses, however very limited funding.
- Passing onto students through social media and posters, information regarding potential careers.
- Hosting careers nights at schools for parents to attend also
- Directing students to Taratahi Agriculture Training School.

All of the above methods varied depending on the school, however the perception gained was a lot of the responsibility for providing the information was on the industry itself, and then the responsibility to sell it were the careers advisor or the school. It appeared to that information was often provided to advisors to pass onto students, without any real instructions of how to best utilise it. Vice versa it appeared there was no feedback given to universities or training organisations on how the information was received and what could be changed to make it more effective.

One school interviewed promoted Agriculture and Horticulture by rebranding it as Animal & Plant Science. This was still predominately agriculture and horticulture based paper, with achievement standards rather than unit standards. By having achievement standards and a science based paper name, the course was viewed a lot more highly by pupils in this all-girls school, and broke down the stigmas associated with agriculture and horticulture. Some examples of the achievement standards taught are Livestock Management, Introduction to plants, Environmental Issues & Landscape planning at year 11, Livestock reproduction, physical environment factors, supply chain & an extensive Agriculture or horticulture project.

It was noted that classes for this subject were at capacity for year 12 and there were two classes at year 10 & 11.

94% of the careers advisors believed the information they were getting was adequate to promote primary industry careers. The information used came mainly from training organisations including universities and industry organisations such as Dairy NZ & Beef & Lamb. The advisors commented that the information from Lincoln and Massey University was good, but there were not enough copies of prospectuses. Another comment was their needed to be more focus on careers that came out of individual degrees or courses, as this was not well known and B.Com Agriculture for example was seen as a degree for farmers. Also a theme that emerged was that careers advisors often had students requesting "a day in the life of" and when it came to the primary industry they found it hard to get people to take students out.

Finally a common theme that came out of the discussions were that careers advisors believed information that came from people actually working in careers, was more engaging for school students, than that supplied or talked about by universities. They believed this was down to the experiences and 'stories' being more honest of what students could expect in a given career.

The final section of the interview looked at what a primary industry student looked like to the careers advisors, along with what barriers they experience to promoting the primary industry as a viable career opportunity. Finally it finished with a question around generating interest in 'primary industries careers'.

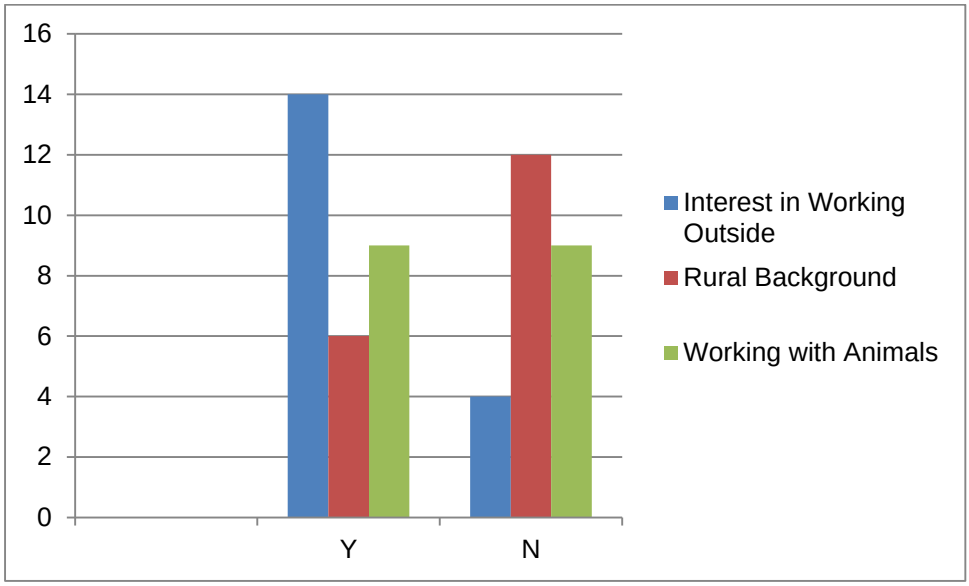
The first question of this section looked at the Careers Quest Tool. Careers Quest is a tool designed to recommend jobs based on a student's actual interests. It is a tool based on the careers NZ website and matches student's interests to a database of around 400 jobs. The focus of this was around the rural based questions that require a positive answer to trigger a rural based career.

Of the advisors interviewed, 83% used the Careers Quest tool, with this consistent across both the Auckland & Taranaki regions. This shows that this is a well-used tool in our education system, and we as an industry need to ensure this is promoting our careers in a positive way.

Three questions that were asked of the advisors that relate to both Career Quest and to what do students you would recommend a primary industry career to look like were:

- Do you see having a rural background as important or not important?
- Do you see an interest in working outdoors as important or not important?
- Is an interest in working with animals important or not important?

The results of the answers to the questions can be viewed in the below figure 2.




I believe that the answer to all of the above questions is not important, as the great range of career opportunities in our industry, provide something for anyone regardless of their background, ability to work out doors or with animals.

The results show that while it is pleasing that majority of careers advisors do not see a rural background as essential to a successful rural career, there is still the perception that a rural/primary based career is outside working with animals. I believe this shows that the stigma around primary industry is just about farming is not just sitting with students but also the careers advisors in some schools.

Some pleasing comments to come out of this question from careers advisors were:

"*Working outdoors or with animals is not important, however depends on the chosen career within the primary industry"* - This shows a great understanding of the different roles and careers within the industry.

*"Rural background is not important, as less and less kids are coming off farms, as they get bigger and bigger"* This came from an Auckland based advisor and was a surprise, however demonstrated a great knowledge of the changing dynamics of the industry and a greater shift towards an urban based population.

There were also a large number of advisors who mentioned that a rural background was not important, but was definitely an advantage.

The next question looked at the barriers careers advisors were experiencing when it came to promoting primary career options to school students. A large number of the barriers are commonly known from previous research such as Kuriger 2001 and Muir 2010. However there were a couple of surprises that came out of this question.

The most common barriers were:

- Lack of knowledge of individual roles in the industry
- 'Lazy" attitude of the current generation of students. E.g the work is to hard

- Gateway programme and Taratahi for example the work is not paid, and they deem this as too hard, compared to a trade apprentice who is paid for their time as they train.
- Early mornings on dairy farm, put a lot of students off and weather seen as “crap”
- Perception that farming is for losers or Agriculture is for Dummies
- Students not aware of the jobs and benefits available
- Perception of a lack of career progression within the industry
- News articles portraying the industry in a poor light. Pupils don’t want to be associated with that

Some of the surprise responses that I received and will discuss further in the next section were:

- Number of students from rural backgrounds who are put off a career in the sector based on experiences they have had at home with their parents.
- Primary degrees such as Ag commerce and Ag science, are seen as limiting by students to their careers, compared to a straight commerce or science degree

Overall the perceptions gained from this question, showed that while there is stigma around the primary industry, a lot of it has to do with a lack of education and promotion of the opportunities available. The focus is still on primary industries and rural, been about farming and not about the other opportunities, including in large cities such as Auckland.

There is also a large emphasis on as an industry we need to sell ourselves better to the up and coming work force. This is not helped by most news articles and social media, focussing on the negative parts of the industry, rather than portraying the success stories and opportunities and career paths available.

The final question of the interview looked at gaining support for a rural taster course at year 9 & 10 level that would run for one semester. The course would provide an insight into the primary sector, looking at stoking the interest of students in the industry. The course would then need to be supported by a follow up NCEA level program. The course could either be run as part of the science program or the rotational subject program, which incorporates drama, music, dance and technologies.

Of the careers advisors surveyed 100% of the careers advisors supported this, with two schools currently doing this already with Agriculture. Both schools make Agriculture compulsory as a one term option period in year 9 or 10, and the results are very promising. Both schools noted that their NCEA agriculture classes were full (aprox 28 students) for year 11 & 12, with this dropping off at year 13 to about half that size. The drop off was attributed to a number of these students entering the industry after 6$^{th}$ form or dropping in favour of a study period. These numbers far exceeded other schools Agricultural class numbers, and due to that most only offered the subject via correspondence because of this. These two schools showed that by offering a taste of the subject early on in a student’s school life, this generates an interest in the subject at NCEA level. Year 9 & 10 is also an important age to get information to these students as often they are beginning to decide on a career and select their NCEA subjects that will lead down that career path.

All the other careers advisors interviewed were very supportive of this; however they did suggest that in order for it to be successful a curriculum would need to be created that made it easy for teachers to facilitate. Some of their other comments were:

*"Would be a great idea, an environmentally focuses achievement standard as part of this would also be great"*

*"Currently with the three main sciences Chemistry/Physics/Life (Biology) a 4th term could be Animal & Plant Science linking to Agriculture"*

*"If you come up with a resource, would love to incorporate this into the school. Would need to be zippy and teacher friendly"*

## Surprises

Some of the surprises to come out of the interviews were

- Number of students from rural backgrounds who are put off a career in the sector based on experiences they have had at home with their parents. Coming from a rural background myself I can understand how this may come about. Farmers are subject to very volatile times on farm, and we are currently seeing this with the dairy industry and a huge drop in on farm income. However farmers need to do a better job of promoting other careers that may not necessarily be 'on farm', however are still related to the primary industry with stable incomes. This will ensure that these talented, knowledgeable and potential employees of our industry are not lost.
- Comments from careers advisors that "bright kids have more options to them, and other kids look at farming or trade based careers". This was disappointing to hear from a limited number of careers advisors. However due to the size of my sample, this opinion could be more wide spread and may warrant further investigation.
- Primary degrees such as Ag commerce and Ag science are seen as limiting by students to careers compared to a straight commerce or science degree. This was interesting and not something I had thought would be an issue previously. An opportunity exists here for careers advisors to then promote for example, commerce degrees that have an agribusiness option as a major.
- Rebranding of agriculture as Animal and Plant science had worked really well in one school interviewed. This was a great insight into an example of how to break down the stigma relating to "agriculture" or "horticulture". It is defiantly something that should be looked into by the industry as these stigmas run through generations of un-educated opinions and are hard to break the cycle.

## Considerations & Limitations

The major limitation to my research project was the level of personal competence. This is the first time I have completed such a project, therefore my in-experience needs to be considered when reading this report and the findings shown.

One of the key limitations of my research was the number of careers advisor interviews completed over the phone. The advantages of this method were the quicker access and speed of the interview process as well as the lower cost. The limitations however were that the interviews were less personal as there is less opportunity for rapport to be built. The result of this is that participants may have been less willing to divulge information or even take part, which may also explain the lower response rate for Auckland schools. I also found it difficult to talk and write down notes at the same time. If conducting this research a second time, I would use a recording device to ensure all information is collected.

The final consideration should be that this report is limited to one urban and one provincial setting. To provide further evidence to the results and theories found, a larger study should be considered incorporating a larger sample size. Due to time and financial constraints this was not considered for this report.

## Recommendations to the industry

Following completion of my research project the following five recommendations should be considered by primary industry leaders and members of parliament.

There needs to be a rebranding of ‘Agriculture’ and ‘Horticulture’ as secondary school subjects. Due to the stigmas attached with both these subjects, I believe this is very important to ensure students are not put off taking these subjects. Successful rebranding examples would be the one school interviewed that run an Animal & Plant science subject which incorporates both agriculture and horticulture. This may not be the answer however more of a starting point for discussion around this topic. Other titles suggested by careers advisors were Agribusiness studies or Primary Industry Management studies.

Introduction of a rural taster course at year 9 & 10 either as part of the 3 science rotation or other subject rotation. This idea had support of 100% of careers advisors interviewed, and two schools were already doing this with Agriculture, and the results were pleasing. A suggestion would be to link this recommendation with the one above and have a rebranded subject that is a fresh face for the industry. It is also important that the course supports achievement standards rather than unit standards to give it some credibility.

Better use of Social Media to promote rural careers especially in Auckland. This is important as most schools require children to have a computer device with them at school. Therefore a lot of information students get comes in an online form. Some comments from careers advisors during interviews were that they don’t get a lot of online information from the primary industry regarding careers, but a lot from other sectors, which goes straight on school Facebook pages and twitter accounts.

Parents are key influencers, so recommendation that schools who don’t already look at individual development plans with students that require parental input, look at this as a solution to poor parent engagement. From the research interviews undertaken it was clear that the schools that were getting great parental engagement were the ones that required parents to be involved in their child’s individual development plans. Parents have a huge influence on their child’s chosen choice of career (Ferry 2006), and the primary industry along with careers advisors, need to develop some strategies to target parents and sell them the opportunities in our industry.

Development of an Auckland based Primary Industry courses at AUT, Auckland University or Massey Albany Campus as well as targeted courses at Asian students. Population growth in New Zealand according to research is going to come in Auckland, and after interviewing the careers advisors in Auckland, it is clear that a lot of students do not want to leave Auckland for further study, especially in Asian families. However there is still a thriving primary industry job market in the Auckland region, with a lot of our largest companies such as Fonterra, having their head office located there. In order to target this pool of future employees for our industry I recommend that a course is developed that is based at one of the Auckland universities, that is easily accessible to the population there. This course could compliment the development work currently being completed at Mount Albert Grammar School farm, where students can progress to after secondary school.

## Further Work

As a result of completing this project an opportunity has arisen to be involved with a local school in Taranaki to participate in forming a business plan to the senior leadership team, around incorporating a rural industry subject into the school. This is a very exciting opportunity and meets one of the objectives set out before beginning this research project.

With my above recommendations I would be interested in been involved in the process around implementing some of these, especially the re-branding of ‘Agriculture as a subject’ and introducing a taster course at year 9 & 10 level. I welcome any feedback on my findings.

Other further steps are to continue to help promote the primary industry as a viable career option in local Taranaki. Opportunities such as speaking at careers expos and local high schools about my own personal experience, to stoke interest in career opportunities and qualifications in the primary industry.

Attracting people to our industry is only one part of the cog, once they are in the industry we need to look after and retain them. If given the opportunity to complete a research project again, I would look to focus on this stage and what we are doing as an industry to retain our successful staff.

## Conclusions

This research project had three main objectives starting out and I have achieved two of these, with the third likely to come through further work. Firstly I intended to improve awareness of the great career opportunities available to secondary school students in the primary industry. I believe through the interview process with careers advisors I have done this, as some of the conversations during and after the interview, focussed around the opportunities available, and these thoughts were left with the 18 careers advisors. Secondly I aimed to provide some solutions to the industry to help generate interest in the industry. The five key recommendations provided in the report focus on ways the primary industry can get more secondary school students interested in the industry. Contained in the report are further mini ideas that should also not be ignored.

The three key study questions I had formed the basis of my research project, and helped me form a non-probability sampling method. The interview process looked at how primary industry careers were been promoted in schools if at all, what knowledge and tools careers advisors were equipped with for promoting the industry and finally what barriers they were coming across when trying to promote a primary industry career.

The main findings of the research showed that most schools do promote careers in the primary sector however this could be one specific career such as vet, and most admitted they don't do it well and could do it better. They were mostly happy with the information received from industry, however felt there was a large amount of paper and there could be more online material. The overall feeling was careers advisors knew there were a broad range of careers opportunities available in the primary sector, however there knowledge of specific jobs was average. The main stigmas associated with the primary industry were seen as Agriculture was for 'dummies' and the work was too hard. Some surprises from the research were that students viewed Agriculture or Horticulture based degree as career limiting and not broad enough. All the careers advisors interviewed supported introducing a rural taster course at a junior school level.

The key recommendations to come out of this research project to the industry are rebranding of agriculture & horticulture as a school subject; introduction of a rural taster course at year 9 & 10; better utilisation of social media around careers as an industry; more material on primary careers targeted at parents and the introduction of primary courses in Auckland city itself.

Further research should be targeted at the current tertiary courses available and if they are in fact limiting to careers. For example research should look at the difference between a straight bachelor of commerce and a bachelor of agri-commerce, and the options available. Other additional research around how we as an industry are retaining staff would also be interesting and how this is then affecting the attraction of new staff.

A final thought to the industry is that we as Industry leaders need to get better at offering time to have students shadow you in your workplace to help promote our careers and our industry. The career opportunities in the primary sector are endless, and as leaders we are the best placed to sell these opportunities to the next generation.

## References


- 11 Ways Finland's Education System shows us that "Less is more". (2015 April 25), *Fullbright.* Retrieved from http://fillingmymap.com/2015/04/15/11
- Auckland City Council (2013) *Census 2013 summary and findings.* Retrieved from http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/reports/Documents/aucklandprofileinitialresults2013census201405.pdf
- D. Norman, G. Nana, J.L. Leung-Wai (2007) *Taranaki Industry Projections 2006-2026.* Retrieved from http://www.taranaki.info/admin/data/business/taranaki_industry_projections_2007.pdf
- Ferry N.M.(2006) *Factors influencing career Choices of Adolescents and Young Adults in Rural Pennsylvania*
- Henry, K.A., Talbert B.A. & Morris P.V., (2014) *Agricultural Education in an Urban Charter School: Perspectives and Challenges"*
- Knowles, I. (2010) *Agriculture Education & Training in NZ.* Retrieved from http://www.nuffield.org.nz/reports/report-details/item/agriculture-education-and-training-in-new-zealand/
- Lewis, P., Saunders, M. & Thornhill, A. (2009) *Research Methods for Business Students* (5th Edition). Essex: Rotolito Lombarda.
- Ministry of Business, Innovation & Employment (2015) *2015 Occupation Outlook.* Retrieved from http://mbie.govt.nz/occupation-outlook/
- Patton, M.Q. (2002) *Qualitative Research and Evaluation Methods* (3rd Edition). Thousand Oakes, CA: Sage.
- Plans to expand ASB MAGS Farm at Mt. Albert Grammar School. (2015, June 10) *Scoop Media.* Retrieved from http://www.scoop.co.nz/stories/ED1506/S00056/
- Robson, C. (2002) *Real World Research* (2nd edition). Oxford: Blackwell.
- Smith, C.B. (1991) *A Guide to Business Research*. Chicago, IL: Nelson-Hall.
- Smith, G. (2014) *Key trends & demands in New Zealand's farming sector*. Future Farming conference 2014: Wellington.
- Yes Wool to Weta, but no to zombie towns. (2014, October 6) *Business and Economic Research Limited.* Retrieved from *www.berl.co.nz*

## Appendix 1

***Section 1***
***How long have you been a careers advisor/teacher?***

***0-5 years  5-10 years  10-15 years  15 years +***

This question was collected for demographical purposes. It can however still be utilised in the discussion, as experience can often be seen as a key factor when influencing students and their parents. (Reference theory here)

***What year do you first begin offering career advice to pupils at your school?***

***Year 9  Year 10  Year 11  Year 12  Year 13***

This question was used to see if there was a consistent approach across schools at what year level career advice began.

***What is your background? E.g previous career and qualifications obtained?***

This question looks at the qualifications required to give career advice and the pathways careers advisors have come from to get to their current role.

***What are the top 2-3 questions school pupils pose to you regarding their future careers?***

A question designed to see what students were asking careers advisors regarding careers. The purpose of this was to determine what students are coming to careers advisors for e.g have they made their mind up already on a career (careers advisor having very little influence), or whether there was an opportunity to upsell the primary industry.

***How do you engage with pupils parents regarding careers advice?***

and

***How much influence on a scale of 1-10 in your experience do you believe pupils parents have on their overall career decision?***

***0  1  2  3  4  5  6  7  8  9  10***

Bothe the above questions are related to (N.M Ferry – 2006), and the results of her study showing how much an influence family and parents have on the students overall career decision. These questions were designed to create discussion around this in the New Zealand setting.

***Section 2***

***What career options are you aware of in the primary/rural sector in New Zealand?***

This question was primarily a knowledge check of the careers advisor on opportunities they were aware of in the primary sector.

***Do you promote careers in the rural/primary sector to school pupils?***

***YES NO***
***If no, what factors prevent you from promoting rural careers?***
***If yes, how is the rural/primary industry promoted in your school?***

This group of discussion questions were designed to simply identify whether rural careers were promoted in the school, and in what way. If respondents answered no to this question they were asked why not?

***Do you feel you have the adequate access to information to promote rural/primary industry careers to secondary school pupils?***

***YES NO***

***What access to information do you have regarding the rural/primary industry and its career opportunities?***

This group of questions was used to identify whether the careers advisor thought the information received was adequate to promote a rural/primary career. This closed question was followed with an open question requesting to know what information they did get.

***Section 3***

***Do you use Career Quest as a tool in your job?***

***YES NO***

Careers Quest is a tool designed to recommend jobs based on a student's actual interests. It is a tool based on the careers NZ website and matches student's interests to a database of around 400 jobs. The reason I have included this as a question is to see how widespread this is used and the careers advisors thoughts on it. It also leads into the next question.

***What does a student you would recommend a rural/primary career look like to you?***

| | | |
|---|---|---|
| ***Rural Background*** | ***Important*** | ***Not Important*** |
| ***Interest in Working Out Doors*** | ***Important*** | ***Not Important*** |
| ***Happy Working with Animals*** | ***Important*** | ***Not Important*** |

The above question was utilised to identify in the careers advisors opinion whether the above factors have a bearing on what career path is suggested to them. I will discuss this further in the results section, however due to the range of jobs available in the primary sector I believe none of these factors are important to someone been successful and a leader in our industry. These three questions are also a key part of the Career Quest tool, generating rural industry jobs.

***Have you had an enquiry from a pupil regarding a career in the rural/primary sector? And if yes where do you direct pupils who come to you seeking advice about a career in the rural/primary industry?***

This question here is looking at where students are directed to find out more about a primary industry career. The purpose of this was to identify if the correct organisations and pathways were been identified by advisors or if students could potentially be falling through the gaps.

***What do you believe are the major factors putting off/preventing school students taking up careers in the rural/primary sectors from your experience?***

Kuriger (2001), identified some potential stigmas associated with the primary industry and in particular dairy farming. This question is designed to generate discussion around feedback careers advisors hear from students around careers in the primary sector.

***Would you support a Rural Industry Taster course at year 9 &/or 10 that ran for one school term (similar to current Music/Drama/technology & Home economics courses)? What would your thoughts be on this?***

A question designed at whether the school would be interested in running a taster course that ran for 1 term of the school year, and formed part of the rotation of other subjects like music & drama. The idea of this was around generating interest in the primary industry at an earlier age as identified by Muir (2010), as by the time they have reached year 11 to 13 it is too late, as often they have selected their subjects based on their preferred career.

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