



A Nuffield Farming Scholarships Trust Report

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**The Trehane Trust and
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Who will Milk the Cows:
the recruitment, training and retention
of high quality workers in the dairy industry

Andrew Brewer

August 2015

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A Nuffield (UK) Farming Scholarships Trust Report



Date of report: August 2015

*"Leading positive change in agriculture.
Inspiring passion and potential in people."*

Title	Who will milk the cows: the recruitment, training and retention of high quality workers in the dairy industry
Scholar	Andrew Brewer
Sponsor	The Trehane Trust and The Dartington Cattle Breeders' Trust
Objectives of Study Tour	<ul style="list-style-type: none">- To find innovative initiatives for staff recruitment- To understand other industries' policies regarding staff recruitment and retention- To find the missing links between industry and future possible staff- To give some direction to the dairy industry on how to engage better with future and present staff
Countries Visited	Canada, USA, Sweden, Israel, The Netherlands, Indonesia, Australia, New Zealand, The Philippines and Ireland
Messages	<ul style="list-style-type: none">- The best businesses value their workforces- The UK has the potential to be a dairy powerhouse once again if, as an industry, it develops a cluster of strength which in turn will attract people- Success attracts people; constant negativity repels people.- To harvest the best crop you have to start with the seed and seedbed. Managing people is no different.- Staff are one of the most important resources of any business. Treat them accordingly.

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DISCLAIMER

The opinions expressed in this report are my own and not necessarily those of the Nuffield Farming Scholarships Trust, or of my sponsor, or of any other sponsoring body.

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1.0. Personal Introduction

I have never worked anywhere else but on our family farm. When I left school at 16 my mother was told by my headmaster that I would be wasted just going home to work on the farm. He wanted me to stay at school to take A Levels. I had other ideas and leaving school for the farm was one of the best decisions I ever made.

I worked with my mother and uncle on the farm after my father passed away. Having always said that I far prefer animals to people, I followed my passion and farmed livestock.

I attended Duchy College for 12 months and completed an NCA in 1988. I had promised my father before he passed away when I was aged 14 that I would go to college. This experience, together with membership of the Young Farmers Club (YFC) movement, gave me an opportunity to meet influential people who, in turn, further inspired my desire to improve our family farm.



Me, Andrew Brewer

The most influential person that I met through Young Farmers has to be my wife Claire. Together we have two fantastic daughters, Rebecca and Emily, aged 16 and 14 respectively, whom we are encouraging to develop and set targets for their futures.

Our operation now is very different from the one I joined when I first came to work on the family farm. At that time we ran a typical, mixed, 300 acre family farm milking 60 cows, with 100 ewes, a small beef enterprise and arable.

We now farm over 900 acres, milk 650 spring calving cows, milk once a day and employ five members of staff. We rear all our replacements and all suitable bull calves are reared as veal calves. We have branched out into renewable energy and run a holiday let.

We have always kept a very open house in regard to visitors. This brings untold benefits in terms of acquiring learned friends. Nuffield Farming Scholars, YFC Exchangees and farming friends come to stay and the stories told, and the strategies discussed, have to be one of the biggest influences on not only myself but the whole family.

We can never know it all, but any chance to know a little more must never be missed.

Since taking part in the Nuffield Farming programme we promote agriculture as a career to school children and currently have a young man who comes to us on the farm one day a week as part of his education, as opposed to spending the day at school.

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2.0. The industry background

Who will milk the cows?

As an industry agriculture is finding it more and more difficult to source good quality staff who are passionate about the industry. In fact finding *any* good staff is getting more and more difficult.

As dairy farmers we need to find a way for the dairy industry to encourage high quality school leavers to look at dairy farming as a good career choice. During my Nuffield Farming study tour I wanted to discover how other countries are finding good quality staff.

Schools and universities are selling tertiary education as a “must” for all.

Currently the majority of staff employed on dairy farms comprise the sons and daughters of the owners, farm workers who are over 50, and Eastern Europeans. More and more farm children are looking outside agriculture for employment as they have seen their parents doing hard physical work all their lives, in many cases for little reward.

There are many opportunities for rural children to find well paid jobs in the towns and cities and these are being sold by educationalists as a far better career opportunity than any agricultural job. We need to find a way to encourage our own rural families to come back to the land.

Schools and universities are selling tertiary education as a “must” for all. However, I believe a significant proportion of school leavers would prefer to learn practically, but aren’t being made aware of other options.

Eastern European staff are filling a very important role in the dairy sector, but in most cases they are looking to work in the UK for a relatively short period. Their aim is to make as much money as possible so that they can return home to give themselves and their families a better lifestyle. Many return to their country of birth having worked long hours for pay which far exceeds the income they would have received at home. The Eastern European phenomenon has advantages for both the dairy sector and the employee. However, it does mean that trained staff return home and leave a gap which takes both time and training to refill. Communication with new foreign staff can be difficult, as can dealing with different cultural issues.

The very experienced UK-born cowmen who are heading towards retirement won’t want to work for ever. Young people are needed for training now before we lose the older generation’s experience and knowledge. Once farm knowledge is lost it will be extremely difficult to replace. It’s not just how to milk the cows, it’s where are the field drains? How could we maintain the hedges or effect sophisticated pasture management? the list goes on and on.

There will come a point in time when we have exhausted all the European staff options, the older staff have retired, and the rural youth are already working somewhere else.

Where next? Who will milk the cows?



3.0. Countries visited

Country	When	Why
CANADA	March/June 2013	The Contemporary Scholars Conference (attended by all new Nuffield Farming Scholars internationally) was held in Canada. Meeting Scholars from around the globe was a great networking opportunity and also gave me leads for my individual studies. I was told what was expected of me as a Nuffield Farming Scholar. During this conference I learn a little about the Canadian Ag for Life programme and decided I would benefit hugely from further meetings in Canada.
USA	June/July 2013	I wanted to go to America and look at some of their huge housed units to find out how large numbers of staff were managed in such an environment, and how the workforces were maintained and trained. This was to be my first solo trip. I was fortunate to join The 300 Cow Club for the first 10 days and had the opportunity to visit many leading dairies (milk handlers) with the group, including Milksource. I also aimed to visit some of the companies featured on Fortune's List of top ranking companies to work for worldwide.
SWEDEN	September 2013	The innovation and technology being developed with DeLaval by way of robotic milking equipment was one of the draws for the visit to Sweden. I wanted to discover what quality of employee would be required by businesses wanting to operate robotic rotary milking machines in the future.
THE NETHERLANDS	October 2013	I wanted to visit a country on our doorstep, which has such a different attitude to the dairy industry to that in the UK. I wanted to understand the education system and the mindset of a country whose dairy industry was eager for the ending of the milk quota system and how it was preparing for a future without quota restrictions.
ISRAEL	October 2013	I was fortunate to be invited to attend the Global Dairy Farmers Conference. This was a wonderful opportunity to look at a completely different system to our own and see how dairy farming operated in very different conditions to our own: with a lack of water and easily available food sources for the cattle.



INDONESIA	November 2013	The Indonesian visit was inspired by networking at the Global Dairy Farmers Conference. I wanted to look at the way in which Indonesia's dairy industry was expanding into new markets, and how the whole business was run using local people.
AUSTRALIA	December 2013/January 2014	Western Australia had over 1800 dairy farms when I visited 25 years ago and in 2013 had only 180. I wanted to visit to find out how they were tackling the issues. I also visited Tasmania, New South Wales and Victoria
NEW ZEALAND	December	A Nuffield dairy study would not be complete without a visit to the dairy capital of the southern hemisphere. My aim was to visit their research and development body, which has a very well established structure for progression. I also wanted to visit the multi-farm enterprises to see how they managed farm progression.
THE PHILIPPINES	January 2014	Many dairy farms around the world source their labour from the Philippines. I wanted to understand what drove the Philipinos to work abroad and, in particular, the reasons why they wanted to work on dairy farms.
IRELAND	January 2014	I wanted to look at how the strategies put in place by the Irish Government and dairy Industry to expand post quota were being driven and how training was being implemented.
SCOTLAND	June 2014	A visit to the Highland Show enabled me to meet most of the contacts I had targeted in Scotland. The new initiatives were a particular focus area.



4.0. Introduction to my topic

4.i. Farm systems

During my travels I found a wide range of dairy farming systems. The number of cows milked on these farms ranged from 30 cows to 30,000 cows. Staffing on these farms varied from one family member to over four hundred members of staff. Staff motivation and engagement was probably the largest variance encountered. The farm systems varied from very protocol-based – “this way or no way” systems - to a simple business core-results-focused systems allowing staff the flexibility to manage the farm in their own way to achieve the desired result.

The high input systems developed in the US are being replicated in many countries around the world. They are reliant on perceived low skilled/low cost labour, which is mainly immigrant labour in the more developed countries. This system is perceived to be more adoptable where a plentiful labour resource is believed to be available.

However, findings from my travels indicate that this system is hard to manage, and it is difficult to maintain engagement and maintain staff on a long term basis within the business. In my view this is due to the factory style work requirements of the staff.

Development of simple, replicable systems as found on many grazing-based operations where staff members are more empowered and engaged in the day to day decision making on the farm, proves to be more manageable in the longer term. On many of the larger farms there were clear progression paths for staff and the opportunity for share farming agreements in the future.

The empowerment of staff in any farm system is vital for the long term competitiveness of any successful business. By empowering staff it will improve the standard of their work and results will improve the business's overall profitability. A shining example of this would be Wegmans' supermarkets in New York State, USA. This is a family-owned business and has been regularly in the top 10 of Fortune's List of the Top 100 companies to work for.

Given the British view that working in a supermarket, like farm work, is one of the less desirable job opportunities made Wegmans an obvious target for me to study. What I found was very engaged staff who were proud to be working at Wegmans. Many staff had been employed there for many years. The secret to Wegmans' success in achieving high staff engagement is their core values, with staff being actively involved in maintaining these standards. Wegmans' core values are:

- **Caring** - We care about the wellbeing and success of every person.
- **High Standards** are a way of life - we pursue excellence in everything we do.
- **Making a difference.** We make a difference in every community we serve.
- **Respect** - We respect and listen to our people.
- **Empowerment** – We empower our people to make decisions that improve their work and benefit our customers and our company (*see www.wegmans.com*).



4.ii. Land use

Are we using the land to its most sustainable potential? How many more jobs could agriculture create if land was fully utilised?

I suggest that there are thousands of acres in each county of the UK that could be more sustainably used to produce food. The UK is currently only 68 percent self-sufficient in food and this figure has dropped from 87 percent in the early 1990s. The world is concerned about food miles so we in the UK need to be feeding the nation, not relying on imports. This was Lord Nuffield's desired outcome when he set up his Farming Scholarship programme!

UK farming has become complacent due to its reliance on EU subsidies with the focus of many farm businesses being to maximise income from any government scheme possible. If the energy and time spent pursuing these income streams was invested in maximising in a sustainable way the potential of the land they farm, whatever its grade, there would be far wider benefits for the whole country.



Figure 1: Filipino labour hand planting rice, thus providing social benefits for the local community.



5.0. Competitive advantage and Comparative advantage

During my studies the terms competitive and comparative advantage came up several times. The box below explains the terms. As the resource mix is more or less fixed within a country or region, this fits into a rather passive (inherited) view regarding national economic opportunity and can easily be adapted to the UK dairy industry. In the context of agriculture, competitive advantage means the advantages that a firm has over its competitors, thereby allowing it to generate greater sales or improved margins, and/or retain more customers than its competition.

Cost advantage

- Term associated with 19th Century English economist David Ricardo.
- Considers that individual countries have unique resource mixes (natural, physical, financial, human etc.). Ricardo considered what each country should produce in terms of goods and services. He suggested that based on cost advantage each country should specialise in certain goods and services.
- Cost advantage can be described in two ways: **absolute advantage** and **comparative advantage**.
- **Absolute advantage** describes being more productive or cost efficient than another country for a specific good or service
- **Comparative advantage** described by what margin one country is more productive or efficient than another. This can be assessed in terms of the resource mix such as land, location and climate, natural resources such as energy, minerals, water, soil, labour and skills and the size of the population.

Competitive advantage

Competitive advantage considers more than cost advantages and cost structure. There are many types of competitive advantage including costs, product and service (customer support) offer, and the logistics and distribution infrastructure.

5.i. The UK's possible Comparative/Competitive advantages

Does the UK dairy farming industry have a competitive/comparative advantage? If not how can we get one?

Certainly given its climate and proximity to population, soils etc., the UK should have a huge **comparative** advantage compared to many countries. So how have we lost the ability to utilise this valuable resource?

A question I asked myself and many of the people I interviewed was: *Why isn't the UK dairy industry flourishing?* Generally the answer was a huge shrug of the shoulders.



Answers I received ranged from:

- the UK dairy industry needs a countrywide strategy
- EU subsidies need to refocus to make agriculture more efficient
- farmers and processors need to work together, not against each other.

Both the Irish to the west and Dutch to the east are countries with thriving dairy industries. They make the most of the Comparative advantage of climate. They produce the maximum amount of milk from the most efficient use of labour, yet in very different methods. For example the Irish had very simple grass based, low input systems. The Dutch made highly efficient use of their own technology to reduce labour inputs: e.g. from Lely robotic milking machines to robotic slurry scrapers. Both systems created time for staff and/or the business owners to enjoy life.

Why has the British industry struggled to reach previous production levels and has lost 50 per cent of dairy farmer numbers every 10 years for the last 40 years, when countries either side of us have continuously filled their quota and have strategies to grow milk production post-quota in 2015?

Perhaps it is due to the previous UK focus on high input systems, similar to the high input US-based herds which focus on yield and margin rather than profit and return on equity. As an industry the UK has followed someone else's Comparative advantage rather than pursuing its own Competitive advantage.

UK dairy farmers will have to become more focused on the aspects of the business which they *can* control, rather than being over-influenced by non-independent advice from suppliers/advisors who clearly have to put the profit/needs of their own businesses first.

Too many UK dairy farmers fail to make their own independent judgments.

5.ii. Cluster development

The Irish and Dutch dairy industries have developed strong dairy business *clusters*.

For a definition and greater understanding of the term I quote on the next page from "Clusters: A key to Rural Prosperity", a paper written by Humaira Irshad for the Government of Alberta, Canada, Department of Agriculture and Rural Development:

(see [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/csi12897/\\$FILE/Clusters-%20A-key-to-Rural-Prosperity.pdf](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/csi12897/$FILE/Clusters-%20A-key-to-Rural-Prosperity.pdf))

continued overleaf



"Cluster" is a broad concept rather than a precise term. A business cluster can be defined as:

Firms and related economic factors and institutions that draw productive advantage from their mutual proximity and connections. In more general terms, clusters can be defined as a group of firms, related economic actors, and institutions that are located near each other and have reached a sufficient scale to develop specialised expertise, services, resources, suppliers and skills.

Various definitions of clusters exist to suit different countries' competitiveness. However, the United Nations Industrial Development Organisation (UNIDO) provides a fairly comprehensive definition of cluster. According to UNIDO:

"Clusters are sectoral and geographical concentrations of enterprises that produce and sell a range of related or complementary products, and thus face common challenges and opportunities. These concentrations can give rise to external economies such as emergence of specialised suppliers of raw materials and components, or growth of a pool of sector-specific skills and foster development of specialised services in technical, managerial and financial matters. Networks are groups of firms that cooperate on a joint development project complementing each other and specialising in order to overcome common problems, achieve collective efficiency and penetrate markets beyond their individual reach."

*The **success** of clusters generally depends upon:*

- *the availability of venture capital*
- *critical mass*
- *technical infrastructure*
- *presence of higher education and research institutions*
- *entrepreneurial drive*
- *influence of champions*
- *presence of an anchor firm(s)*
- *networks and quality of linkages*
- *social capital and*
- *diversity.*

*Ideally the following pre-requisites are needed for **effective** clusters:*

- *Good input conditions (such as skills and knowledge, raw resources, products, soil, climate, and natural resources)*
- *Supporting industries, (like venture capitalists, market research companies, and R&D companies)*
- *Demand, (sophisticated customers who can distinguish different qualities and brands and demand high standards)*
- *Rivalry, (competition) and the desire to work together.*

Effective clusters involve a combination of pressure (competition) and support.

(from : [Http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/csi12897/\\$FILE/Clusters-%20A-key-to-Rural-Prosperity.pdf](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/csi12897/$FILE/Clusters-%20A-key-to-Rural-Prosperity.pdf))



5.iii. Pride

In Holland, Sweden and New Zealand the pride of the farmers was clear to see, with efforts being made to improve the appearance of the farm. The farms were immaculately clean and tidy and farmers maintained that the public must be given the right image of farming at all costs. The public perception of farmers as keen business people and their standing within society was enhanced by engagement in local communities, and through involvement with the council/communities. For example in Wisconsin, USA, regular farm breakfasts are held throughout the spring and summer offering farm tours with coffee and bacon rolls to the local community. Up to 9,000 people visited one such farm on a Saturday morning.

As UK farmers we need to be proud of what we do, where we live, what we produce and what we protect. We need to be proactive and positive in our connections with the press and our local communities. Many farmers help their local communities but we need to make our actual farms more available to the public/schools.

Take the first small step and tidy up.



Figure 2: Typically immaculate Dutch dairy



5.iv. Generations

Traditionally in the UK the farm has been passed through the generations via the eldest son. Little or no regard had been given as to whether he was the most suitable person to run the farm or whether farming was his passion. This is slowly changing on most farms, but succession remains a major issue with most farming businesses.

Does the next generation provide the right person to run the farm or is it now time to start looking for people with energy, passion and ability to give the next owner a better income and a life where their individual passion can be followed?

I am not suggesting selling the family silver but instead making the best of your family's investment. Typically, when non-agricultural businesses expand, the families will be the owners but a CEO and board of directors will run the business. Why does farming have to be different? For example Tetra Pak is a family-owned business with family board members, but it employs the best minds, recruited externally, to run the business giving the owners time to follow their dreams.

5.v. Profitability – not a dirty word

In the UK we need to start talking about profit and free cash. Currently we talk about yield and margins but, at the end of the day, these mean nothing if your business isn't profitable.

There is also a huge difference between a profitable business and one that is producing free cash. Too many people forget that after profit the taxman needs to be paid, the farmer and his family need to live, and depreciation and reinvestment is needed. To really move forward a business needs to have all this plus free cash to invest or spend as wished. We cannot rely on land values increasing, allowing us to borrow more money to sustain failing businesses with no exit strategy.

People are attracted to success. If businesses are not profitable and viewed as unsuccessful we will never attract the quality of people we need for the industry to thrive.

Do farmers really want the bank to inherit their farm?

Turnover is vanity, profit is sanity, cash is reality.



6.0. People

6.i. Retaining the best of our own

All too often we are told that there are no contenders within the family to run the farming business. Lack of profitability, long hours, and lack of quality family time are all issues. Each generation has different expectations regarding work. The industry needs to change to accommodate future generations' needs and wants. To begin with, do the generations actually know each other's goals?

How many times has it been said to farming children - by those educating them - that they are too good to go farming? We need to change the perception that agriculture is for the less intelligent when in fact we need highly motivated, intelligent people in agriculture as it is now a very technical industry. The day-to-day needs of the farm can and should be far more intellectually challenging than in the past.

There is no one "right" dairy production system other than the system that catches the hearts and minds of the next generation. Our children need to see that farming can be enjoyable and enrich their lives without having to kill themselves while working.

We need to reduce the long working hours and encourage our children to have hobbies away from the farm even if these are agriculturally based: e.g. Young Farmers Clubs, showing, music, sport etc. Benchmarking/recording of cow-free days (CFDs) should not be used as a weapon by the older generation to prove how much harder they work than their younger counterparts.

6.ii. Future staff needs

Farm owners, having undertaken continuous professional development in people and business management, need to be competent employers. Many farmers have grown their cow numbers rapidly and are excellent farmers with relief staff. But now they find themselves to be staff managers who are not trained; they are not used to sharing responsibilities and they expect staff to work the same hours as they themselves have previously done. Many farmers expect people to work long hours without the remuneration being competitive with that of other industries.

The dairy industry needs to understand what the next generation requires from life. This may mean employing two people instead of one to reduce working hours per person. It may mean supplying quality accommodation to more staff. We live in a time when a small mobile home is not attractive enough to long term staff. If we ourselves aren't willing to live in the accommodation then don't expect anyone else to.

We need to adopt a system and strategies to allow us to pay people as much as we can and not try and pay people as little as we can. Even if the pay isn't monetary there are other benefits we need to consider.

A survey carried out by Careers and Food Supply showed that the perception of the interviewees was that the agricultural industry was boring, repetitive and low paid. Over the next 5 years the agriculture sector will need 60,000 new entrants. We need to act now to ensure our future. We



have lost a generation of farmers and the average age is now 58, with many businesses growing and requiring more staff. We need to start training our future staff from primary school right up through the educational ranks with a particular focus on secondary schools.

6.iii. Progression

The development of clear progression routes might be perceived as difficult on an industry basis because of the variation in individual businesses.

This thinking should be challenged within every business individually. Not all staff want to be king pin but, for many, starting at the bottom of the ladder with small steps of increased responsibility would be much appreciated.

Individual variation between different personalities should be appreciated by business owners. The use of personality exercises - e.g DOPE¹ – can be beneficial when used as part of team building exercises in a fun environment.

Progression can be taken in many guises. Even if an employee leaves it is progression! - although it may feel more like *regression* in a business when a star performer leaves. (This is a highly likely occurrence as stars tend to shoot!)

As long as a business has sound principles established no one is irreplaceable.

6.iii.a. Slavery

Slavery is probably too strong a word but hopefully it has grabbed your attention. During my travels, on several occasions on different continents I came across staff and business owners and family members who were very disengaged, deeply unhappy and stressed. Family members who felt trapped within the business were threatened and frightened that they would receive nothing from the previous generation unless they worked for a pittance. How does this promote an industry? - when one sees people, especially sons and daughters from the present dairy business, do not want to return to the farm.

It has to be an industry target to change the mentality that it's right to work all hours for what is often a return below the minimum wage. Future generations should be made aware of the great opportunities within a dairy business. Values must be to improve the lives of each future generation as well as the present one, by making use of technology to help change people from **Working Hard to Working Easy**, while at the same time retaining the **Hard Working Ethic** and understanding the difference.

¹ The DOPE personality test is a fun way to evaluate personalities using four birds as personalities the Dove, Owl, Peacock and Eagle. Try the following link and have a go:

<http://www.thrill.com.au/wp-content/uploads/2015/06/DOPE-Test-Personality.pdf>



6.iii.b. Training

How do dairy farms attract high quality staff?

The present situation and the current reality is that there is very little done in the UK to attract high quality people to the industry. There are many initiatives such as Bright Crop (explained further on page 31) and RHET (Royal Highland Education Trust est. 1999: www.rhet.org.uk) which are starting to address the issue; but there needs to be action and involvement by many dairy farmers and not just a few. Dairy farming needs to become a magnet for high quality people and this is achievable by creating a culture of public engagement from primary school to adulthood.

We need to purvey a positive message instead of only demonstrating when things are bad. If those demonstrating put the same effort into promoting the dairy industry when times were good, how much stronger a position would we be in as an industry?

It is far easier to shout when things are hard but we need to cheer and celebrate the good times to show that agriculture is a great career choice and also promote the great things that farmers do both for their local communities and the environment.

Careers advisors need to be educated to the fact that agriculture has well paid jobs with career progression, and is suited for the intelligent and driven pupils. All types of people are needed in the huge variety of trades and professions that make up the agricultural industry. We as farmers need to promote this actively and give the schools the opportunities for young people to come onto our farms; either as farm visits or giving children the chance of a week's work experience. If we don't promote our industry no one else will.

Remember the squeaky wheel gets the grease. If we aren't persistent in our message other industries will benefit from our loss.

6.iii.c. Retaining

Retaining the best staff members - or any staff member who does their job competently and efficiently - is a very underrated attribute of many successful businesses. The hidden cost of losing these members of staff and their silent knowledge is very hard to quantify but my meeting with Justine Kidd of Avance Ltd. In New Zealand emphasised this point. Justine gave me her thoughts as clearly as anyone interviewed. Her rule of thumb was that the cost to the business in replacing a member of staff is three times the exiting staff member's annual salary. This cost includes the time and effort for the recruitment process; training; the change in the team dynamics; and the loss of productivity while the new staff member gets up to speed on a new farm.

... the cost to the business in replacing a member of staff is three times the exiting staff member's annual salary.

All too often staff are seen as a resource which is easily replaceable by the next robot-like worker coming into the business. The job is seen as an industrial type position, fulfilling the outcome that is



required, as opposed to allowing people to think and develop ideas or finding better ways. It's just **"This is what it is and this is how you do it"**.

Many businesses employ stars: high flying, young, keen managers, lacking in experience, desperate to develop further and constantly chasing the next challenge. One farm owner clearly defined this action by telling me that "Stars shoot". This means that the business doesn't have them for long before they are off to the next challenge.

The Stayer may be viewed as not ambitious, and lacking drive. We must ask ourselves: has business lost the "gold watch" mentality, which rewarded loyalty and long service from staff, and instead adopted the "Someone better around the corner, no one is irreplaceable" policy?

All too often knowledge is lost when senior members of staff leave, and it takes time to relearn or it is lost forever. Often time efficiency is lost on the job just by not having a long understanding of the land which is being worked. For example "Where's that water pipe?" or "The cows don't milk as well on that field". Although easily recorded or mapped, and therefore retrievable, often time isn't made to note down these details. It would be far easier and faster if the knowledge could be quickly downloaded from old Jack's 'database'; it takes time to learn the quirks of a farm. Many cultures like the Aborigines had no written records but were strong at "on the job" learning.

The technology age that we are in is without doubt advancing humanity at high speed; but what are we leaving behind by adopting short termism in the workplace, treating people the same as we treat the latest piece of computer hardware or version 6.0 of the latest software? - out of date and out of mind within a few short years or even months?

Is humanity being lost from many dairy farms? The high tech age of agriculture is here to stay but the need for retaining staff will not go away.



Figure 3: Indonesian workers harvesting 56 tonnes of forage to feed 1800 dairy cows plus young stock



During an interview I undertook with the now-retired owner of a large business which had over 10,000 employees, he told me he would spend a significant proportion of his time on the shop floor discussing his home life; how his dog was; asking employees about their home life; as well of course how work was going. This engagement really paid off at a time when a drive for expansion wasn't going to plan and the original factory had to increase production and efficiency rapidly. Immediately the whole workforce was behind the man who discussed his sick dog.

Company culture and values as well as the culture and values of all staff members should be understood in order to build good relationships. There must be clarity of roles and responsibility for all staff.

Clear career pathways are vital and all businesses should have them for members of staff - even if such staff are family members.

Personal development programmes should be put in place with a budget for training built into all employment contracts. Several of the non-agricultural business managers interviewed would spend an average 3% of salaries on continuous personal development for all staff, and up to 15% for star performers.

The assumption that all staff have big aspirations can be a mistake. The value of the person who is happy in their work, understands what they do, and does it well to your expectation and their own satisfaction can't be measured easily. I have found through personal experience that the stayer is worth as much to our farming business as the star. They teach the stars and help them to burn brightly before the latter move on to the next challenge.

The stability the Stayer brings to a business and the benefit brought to the Rising Star in terms of practical learning and understanding the particular peculiarities of the business should not be underestimated.

Another benefit of retaining staff is the retention of knowledge. In New Zealand the average length of employment on dairy farms is 18 months. The knowledge loss on farms in this situation can be very rapid. A more in-depth reasoning on this point is given in 6.vii.a. - Staff churn.

6.iv. High quality – a definition

The definition of high quality as defined in this report's title is one I have battled with for some time.

Is high quality the top of the class, high academic achiever, or is it the practical person with bucket loads of common sense but not a qualification to their name, but who has the capability to do most tasks required of them? Or someone in the middle with a strong ability and attitude to learn new skills?

What the dairy industry needs is a mixture of all types of high quality staff. In the recent CBI/Pearson Education and Skills survey 85% of interviewees cited Attitude towards work as the most important characteristic, followed by Aptitude for work at 63%. Only 30% cited academic results. I believe that these figures are as relevant to the dairy industry as any other.



The CBI report also states that throughout all industries a skills shortage is looming. The dairy industry will find it an even harder job to attract highly skilled people.

Is high quality a combination of the four E's below?

Excellence + Ethics + Engagement + Empathy = FULL FLOW

The four themes above are all important to get full **FLOW** when working.

Each individual "E" is important to achieving high quality work. But the whole combination is necessary.

It is easy to be excellent at your job but still be a complete nightmare to work with within a team. People may be fully engaged in their profession of choice but their standard of work can still be very shoddy.

Each **E (above)** is important and perhaps they are perceived to naturally combine. The findings of my study suggest otherwise: that rather than naturally occurring bonds these combinations must be cultivated and effort by both business owner and employees is necessary. Employers have to work on team and individual weakness to achieve, firstly, employee FLOW.

Staff who are fully **engaged** enjoy their work. They look forward to coming to work at the start of the week. They understand what is required of them and also understand the business they are a part of. This means they are proud to produce even the smallest widget in order to bring success to the business.

The business owners also need to understand the workforce. They need to project clearly what is required from staff and also to give staff a clear view of where the business is heading.

Perhaps:

Excellence + Ethics + Engagement + Empathy = ENDURING ENJOYMENT

6.v. Working hours

Each dairy farm in each country I visited had different expectations of staff and in some instances I was shocked at how many hours staff were expected to work. In the US on many dairy farms the labour was mainly Mexican staff who worked 12 hour shifts for 6 days a week with 10 unpaid days a year. For every year completed with the same employer 1 extra day's holiday was given. In the US the working hours on farms were comparable with those in many other industries.

A high proportion of dairy farm workers in the UK sign the Working Time form agreeing to opt out of the 48 hour working week. Many workers on a dairy farm will work in excess of 60 hours each working week. Most workers will have 2 or more days off a fortnight and will have 21 days paid holiday a year plus time in lieu of bank holidays. Many owner-occupied farmers will proudly tell you that they work over 100 hours a week with little or no holidays.

In most industries in the UK staff will work less than a 40 hour week. Generally, people are looking for more leisure time than the US allocates. In the UK we need to look at whether the current

Who will milk the cows: the recruitment, training and retention of high quality workers in the dairy industry .. by Andrew Brewer

A Nuffield Farming Scholarships Trust report .. generously sponsored by The Trehane Trust and the Dartington Cattle Breeders' Trust



working hours are sustainable when we are competing with other industries for labour. Do we need to look at shortening expected working hours and employing 2 staff to share current roles so that we compete on a working-hours expectation? This will mean that the farm owner or farm manager will need to have a high skill level of communication and delegation to ensure effective leadership of a bigger team.

Staff burnout would then be less of an issue. The efficiency achieved in those working hours would perhaps be more productive for all. It is well recorded and documented that, if one person is milking for more than 3 hours, productivity falls.

In the UK we need to look at other industries in our own country for working hour equivalents: not to the US where they have a different work culture.

6.vi. Generation Y – what do they want?

Has agriculture done enough to understand what generation Y (those born 1977-1994) and even generation Z (born 1995-2012) want in the workplace? During those periods the world has moved from the industrial age to the information age. The expectation of businesses will have to change and recognise that workers are maybe equally as important as customers.

The needs and wants of future generations will be greater than those of past generations. The need to understand what generations Y and Z wants is essential in adapting on farm practices and procedures. It means changing from a protocol culture to a collaborative culture.

6.vii. Investing in people

6.vii.a. Staff churn

Staff turnover in business is a huge cost to business, although difficult to quantify in terms of cash.

A rapid churn of staff accelerates this cost. Independent research shows that, when trained staff leave, too often they only pass on what they can remember in terms of job knowledge.

For example the average length of employment on New Zealand dairy farms has now fallen to eighteen months. The scientific principles of Half Life definitions are:

- Half-life is the time taken for half of all radioactive nuclei to decay.
- Half-life is the time taken for the count rate to fall to half of its original reading.

If we apply these principles to agricultural research and assume a half-life of ten years it will mean that half of all current researches will still be applicable to farming systems in ten years' time.

Within ten years there will have been (on average) a seventh staff change. The likelihood that this person will have even heard of research from 10 years previously is zilch.



When I visited New Zealand for the third time over a nine year period the loss of knowledge of grazing principles - that were originally the foundation of its dairy industry – became highly apparent.

With each changeover of personnel the chances are that, unless significant time and effort are put into training or creating strong written protocols, earlier gained knowledge will haemorrhage from the dairy industry.

Staff churn must not just be accepted as normal. Would business owners really accept a tripling of the wage bill if the staff asked for a raise of 200%? They would happily accept an inline inflationary raise but if asked for a triple inflation rise most would balk at the thought. In that scenario business owners would happily lose staff members and take on a new replacement. All the time and effort and experience are then lost, and training has to start again at a huge cost to the employer.

The current trend to increased herd size and the number of staff employed will generally accelerate the loss of knowledge with each churn. Unless time and effort is put into retaining the knowledge current staff possess, the business will ultimately lose out.

On numerous interviews in the US it was obvious that the main turnover of staff was below the first- or second-in-charge level. People generally don't leave jobs: they leave leaders. Therefore communication to all staff at all levels needs to be continually improved.

6.vii.b. Robotic workers

Time and time again on large dairy units with multiple workers I came face to face with low ranking staff going through the motions. They were lacking engagement, had a dull look to the eye and were going through the motions, just like a robot would carry out repetitive tasks each day. I believe the best employers, with a more comprehensive human resource department or protocol, were a huge benefit to the individual businesses that employed them. They would talk with their staff, rather than at or to their staff. The staff were much more engaged and happy in their work when they felt part of the process.

We must remember that people are not machines, that people do not become automatically updated plus they are the most adaptable species. They will continue to be adaptable and, if treated well, they will become even more adaptable.

6.vii.c. World population

I will not go into details of the well documented predicted population increase, estimated to reach a total of nine billion by 2050. The actual figure could well turn out to be lower than this, but the world's population is undoubtedly on the increase.

An obvious question to raise will be:

What will 9 billion people do?



The main finding of my study in The Philippines and Indonesia was that agriculture was viewed as key to society's social benefit. The wages there were low compared to those of the more developed countries I visited. The Philippines and Indonesia had no benefits/welfare culture and agriculture was providing a purpose for people's lives as well as improving the lives of families within the rural communities.

Rice paddy fields which took 20 people to plant an acre a day were providing good jobs and the crop was cheaper to grow than some of the rice produced in Australia. The latter was using all the appropriate modern equipment including the laser levelling of fields and sowing the rice by airplane.

Whether agriculture will provide a bigger purpose to a western culture is beyond my study scope. As the world population grows and wealth increases, so protein intakes increase also. This in turn boosts dairy product demand. We know there will be peaks and troughs in the milk price until demand settles, but the scope for dairy farmers to grow over time could mean an increase in the numbers of people involved in dairy production.

Purpose in people's lives will be crucial in the future. Purpose will improve happiness and should not be underestimated.

6.vii.e. Karoshi/Arbejdsglaede

The above two words/concepts were highly relevant to my study on attracting and retaining high quality staff into the industry. Firstly **Karoshi**: a Japanese word meaning death from "overwork" (see *Wikipedia*).

When technical excellence is a driving force for staff, and when this is combined with constantly having to reflect about responsibilities within the job, staff very rapidly encounter burn-out unless they are on a mission and/or fully engaged at work. Burn-out can cause stress illness and even death.

Farming has always been viewed as a career which is physically demanding, with long hours. I believe Karoshi is alive and well in the hard pressed dairy industry. The stresses and constant pressure on business owners are then as a consequence passed down the labour chain. But it can and will be helped by technology and better working practice.

Driven individuals entering a dairy-based career will always push hard with many burning out and leaving the dairy industry because of long hours, bad conditions, or simply too much stress. We can't possibly stop all staff losses but adopting many of the principles of the second word **Arbejdsglaede** could stop needless dairy industry career exits for some.

The first case of Karoshi was reported in 1969 with the stroke-related death of a 29-year-old male worker in the shipping department of Japan's largest newspaper company.

However it was not until the latter part of the 1980s, during the Bubble Economy, when several high-ranking business executives who were still in their prime years suddenly died without any previous sign of illness, that the media began picking up on what appeared to be a new phenomenon. This new phenomenon was quickly labelled "Karoshi" and was immediately seen as a new and serious menace for people in the work force.

See: <https://en.wikipedia.org/wiki/Karoshi>



Arbejdsglaede is a Scandinavian word simply meaning happiness at work.

The long term Scandinavian focus on the wellbeing of the employee is a key goal for businesses. Businesses focus on believing that a happy workforce will bring improvements from higher productivity, less sick days, and more success. A focus not purely on the size of the pay packet, but on a fair remuneration with better conditions (be it simple things like better workplace lighting, different shift patterns or a really clear and joyful “good morning”) helps bring happiness to the workplace.

The dairy industry has an opportunity to adopt many small steps to increase the happiness of their human workforce. If only the same time and effort could be put into increasing working conditions for staff as is put into the huge effort to increase the living conditions of the cows that they milk!

Many millions are being spent on new ideas for cows - for instance increasing lying time - to improve yields and reduce lameness. Every new gadget being marketed and advertised as increasing production by a few small percent appears to be eagerly taken up the business owner. Yet often that same farm owner would balk at giving the staff better quality protective clothing or a more expensive pair of boots.

On dairy farms the human workforce needs to be valued as much as, if not more than, the cows. We can't milk cows without people. Investment in people will give a far better return than the marginal benefits of the latest hot product on the market.

Happiness at work can and will bring long term success to business which is why companies like Google, Apple and many other businesses in the top 100 companies to work for invest heavily in, and produce a point of difference, to help attract and retain new employees

Would it not be a great to be with a workforce saying at the start of the week: “Wow it's great to be back at work. What can we achieve today?”, rather than: “TGI Friday.” (Thank God it's Friday).

6.vii.f. Emotional Quotient versus Intelligence Quotient.

The vast majority of people have heard of IQ. Most probably they will have never taken an IQ test and feel that they would not like the outcome if they did!

Or they would have no idea that IQ actually stands for Intelligence Quotient. Most businesses or professions would target applicants with a high IQ, over lower scoring alternative options. Often I heard when conducting interviews with employers about their staff: ‘They were top of their class but just haven't worked out within our team’. Or: ‘They were hard to get along with, lacked motivation’. I'm not suggesting that all people with a high IQ are bad workers but purely repeating what I was told.

The ability to express and control our own emotions is important, but so is our ability to understand, interpret, and respond to the emotions of others. Imagine a world where you couldn't understand when a friend was feeling sad or when a co-worker was angry. Psychologists refer to this ability as emotional intelligence, and some experts even suggest that it can be more important than IQ.

See: <http://www.winning.pt/pt/news/240-emotional-intelligence>



The term EQ is far less well known, standing for Emotional Quotient and relates to Emotional Intelligence.

The ability to understand co-workers' or business owners' emotions can, some believe, be an innate ability one is born with, while others believe it can be learnt. It is the ability to understand others' actions or inactions.

Perhaps dairy business owners need more EQ to understand the signals from staff and people.

Cow signals are a concept founded by Joep Driessen from Holland. It means understanding the behaviour of cows. He runs many courses on farm and online, most being well attended.

Would a similar course into the unspoken behaviours and mannerisms of staff or bosses be well attended as there would not be cows present, or the concept would not be thought of as agricultural? The need to engage the dairy industry in EQ as well as IQ cannot be underestimated

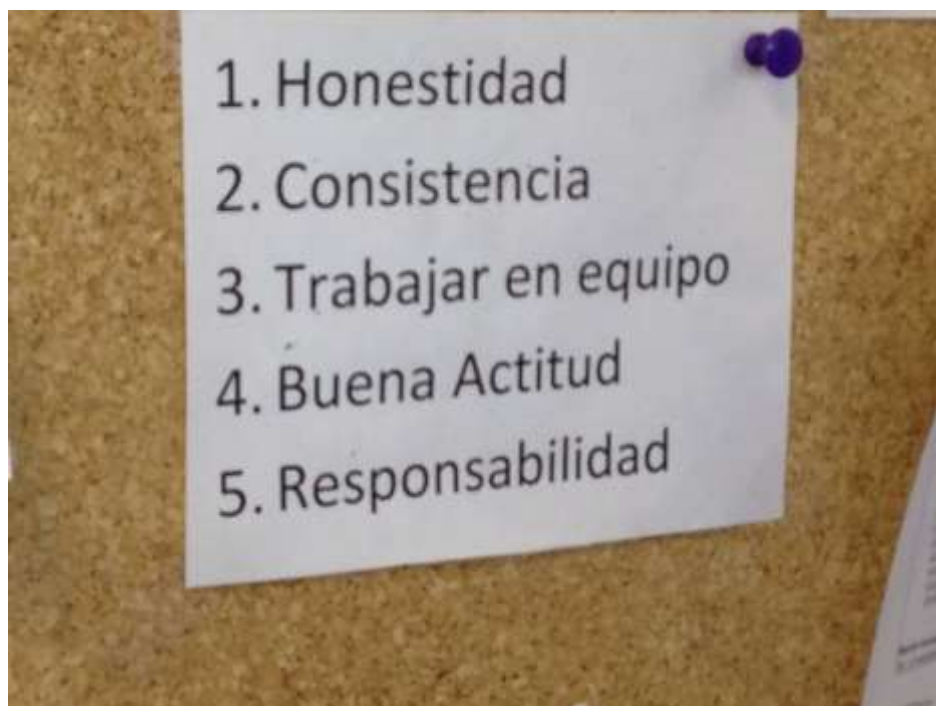


Figure 4: Photo taken at the Durst brothers' farm canteen in USA
Honesty, Consistency, Teamwork, Attitude and Responsibility
sums up what needed across the whole team.



7.0. Policy

Does the UK Dairy Industry have a Policy or Vision?

7.i. Government

Michael Porter's work on economic clusters and the diamond model published in his book "The Competitive Advantage of Nations" clearly describes the government role as follows:

"The role of government is to act as a catalyst and challenger; it is to encourage - or even push - companies to raise their aspirations and move to higher levels of competitive performance. They must encourage companies to raise their performance, to stimulate early demand for advanced products, to focus on specialised factor creation and to stimulate local rivalry by limiting direct cooperation and enforcing anti-trust regulations".

As we enter this new post-quota era, the dairy industry cannot rely on successive governments to save an industry constantly complaining.

The ear of government will be far more receptive to a business approach, one which is helping ourselves like some of our European Union competitor industries do.

As an industry we need to improve in efficiency, and use our comparative and competitive advantages. Then the dairy industry would increase its profitability and the government would increase its tax revenues. This in turn would benefit the wider country. I believe there would be more support for the industry and hopefully we in turn we could change the mindset of many in the government so that they viewed the dairy industry as a good career choice.

If cross-departmental appreciation of the viability of the agricultural sector increases, so agricultural influence will start to trickle through and agriculture will be a bigger part of both government and the education curriculum. In the UK the curriculum for agriculture is way out of date and we need to lobby the government education department to bring agricultural education up to date.

7.ii. Leadership – are we involving the best people?

How often do we hear of people who are brilliant in class and top of the year, but lacking in common sense?

Many business leaders - such as Richard Branson and Mark Zuckerberg - will have adopted Cowboy Logic. For a definition of Cowboy Logic I am indebted to: <http://www.cowboylogic.net> from which website I have quoted liberally below:

"When all around you are using common sense, fill the gap. Use UNCOMMON sense.

"Cowboy Logic has a reputation as the type of thinking that charges ahead without planning with a cavalier grin and a devil-may-care attitude about the results. In the software industry, Cowboy Code is the term given software that was built in the late 20th century and early 21st



century by a bunch of 25 year old millionaires who broke the industry open with seemingly endless bank rolls and a computer in the garage.

“The truth about Cowboy Logic, is considerably different. It's a story of studied observation and painful life lessons that prepares a cowboy to charge into a life and death situation with an air of everyday work on the job. The thing is, the hours of observation and learning culminates in the right move done at the speed of a charging steer.”

The need to get people to lead the attraction and retention of the next generation of staff must be people already doing a great job of employing staff; or really enthusiastic staff members from the rank and file, from apprentices to the largest estate owners. These need to be people with energy, enthusiasm and intelligence, who are willing to stick their necks out to put effort into engaging with the next generation of employees. Many of this next generation may never have considered agriculture as providing opportunities for lifelong careers. We need people who can lead the charge towards getting high quality people into dairy farming.

Farmers need to undertake training into managing people and understanding human behaviour, as well as understanding animal behaviour. Development of suitable courses to attend is needed.

The leaders needed can only lead if they have a clear vision, which can and must be developed or else the cowboys will endlessly search for the steers in the fog of misunderstanding of direction.

7.iv. Now is the time

The timing of this report has coincided with a change in attitudes towards food and agriculture. There is a positive culture change by the media with programmes like Lambing Live and Jimmy's Farm, as well as endless cooking shows. Surely now is the time to lever this positivity into benefit for the farming industry.

The first agricultural revolution started around 1750 AD.

With the realisation farmers will need to feed an increasing population, with more food required in the next 35 years than has ever been produced to date, we are surely at the point of a second agricultural revolution. Would it not be great to think that people will be attracted to come and spend their active working lives in the country, rather than continue the generation brain drain that has been happening over the last 400 years?

It will take planning and inspirational thinking to achieve a clear strategy. There will be difficulties along the way but we are a resilient industry and we will survive and thrive if the right people work towards a common goal.

7.v. Inheritance tax

Is the UK government system for inheritance tax working in regard to attracting people into, or even remaining within, the dairy industry? Perhaps earlier handover of responsibility could be encouraged by:



1. Adoption of EU early retirement schemes which to date have been doggedly resisted by the UK.
2. Changes to the seven year sliding scale of tax liability, if gift recipients are actively trading in the business/agricultural sector.
3. Early gifts of assets before a set age of, say, 55 years old. If the benefactor is farming/running the business he would be exempt from inheritance tax but with a caveat that the business must carry on trading until the benefactor reached the state retirement age, or longer.

7.vi. Producer levy boards

DairyCo as the UK Dairy Levy Board has the chance to become world leading. It already has a wealth of under-utilised information from and about the dairy industry. All dairy farmers contribute to this knowledge at the rate of 0.06ppl (which is significantly less than the European and worldwide average contribution). Regular active engagement of producers is around 10% of the total producers. That is a scary statistic but one that is replicated almost worldwide. Probably the exceptions to this rule would be Western Australia and Ireland.

The Western Dairy, a regional development programme which operates under Dairy Australia, achieves almost 100% regular engagement. This is due to the fall in dairy farm numbers from 1800 twenty years ago to 180 today. A small number of producers facilitates the ability of extension officers to literally drive up the farm lane for face to face meetings and organising discussion groups.

In Ireland, Teagasc, the government research and development organisation, through smart thinking and clear strategy has developed a system of discussion groups and training through a carrot-based approach. Farm businesses attending 10 of the monthly discussion group meetings receive €1000 from Pillar Two, which is funded by farm modulation. In effect returning funds to the farm, this has increased discussion groups from 180 to 1800 in twelve months. The rapid dissemination of knowledge, using their clear, well documented strategy has produced results which can be clearly seen using the link below:

http://www.teagasc.ie/publications/2013/1845/Impact_of_Participation_in_Teagasc_Dairy_Discussion_Groups150113.pdf

7.vi.a. The missing middle

Producers in what I call the “missing middle” are producers not engaged with the levy board, some only getting advice from non-independent consultants such as feed reps and sales reps. These producers would probably mainly sit in the middle section of the industry.

Most top 10% producers would be using independent advisors, engaging with the levy board and utilising new research and development practices.



The bottom 10% of producers will, realistically, be lost from the industry within the next five years, due to the lack of finance, lack of successor, or lack of competence.

Adhering to the Pareto Theory² of 80/20, the 80% that are missing in the middle (I refer to the paragraph above) are probably happy within the boundaries of their farm gate. However, the right encouragement - such as the discussion groups used in Ireland - would facilitate knowledge transfer and potentially create cost-effective upskilling.

More regular interaction with positive messages at such meetings has the potential to uplift the industry. Regular interaction with other farmers is also a good social opportunity: as the old sayings go: *'A problem shared is a problem halved'*, or *'A rising tide lifts all boats'*.

Building relationships through regular meetings can only improve the communication with present and future staff members.

7.vii. European Union Subsidy and the US Farm Bill

Are subsidies actually harming the innovation of the next generation by keeping mature businesses afloat at all times rather than just during times of the downward cycle of volatility?

Changes should be made to better reward the businesses that take the risk of growing, rather than promote stagnation, which is currently the case with the subsidies we have.

The ongoing assumption that small farms will be the first to be affected and need higher subsidies is flawed. The small, long-established family business with little or no debt is far more resistant to volatility than the highly geared larger business. The latter will probably be employing several employees and their families, and will be reliant on a sustainable return.

The EU refused to give assistance to businesses when milk quotas for the dairy industry ended. In the USA, without a new law when the 2008 farm bill was expiring in the autumn of 2012, a reversion to the 1949 Farm Law would have occurred. This would have seen a doubling of milk prices on the supermarket shelves.

Instead the Americans have brought in a new dairy safety net.

It was part of the 2014 Farm Bill and is called the Margin Protection Program. It comes into play when dairy margins fall below the margin coverage levels which the producer chooses each year. It aims to protect farm capital values by guarding against destructively low margins. It is not there to guarantee a profit to individual producers. See: <http://www.futurefordairy.com/program-details> from which, for the sake of accuracy, I have taken my information.

² A principle, named after economist Vilfredo Pareto, that specifies an unequal relationship between inputs and outputs. The principle states that, for many phenomena, 20% of invested input is responsible for 80% of the results obtained. Put another way, 80% of consequences stem from 20% of the causes.



It is the producer *margins*, not the actual milk price, that are supported: because a high milk price doesn't necessarily guarantee profitability if input costs are also very high. The program can thus cope with the effects of catastrophic conditions as well as long periods of low margins. Put very simply, the coverage levels are determined by taking the average price received by farmers across the country for their milk, minus the average feed cost for a cow producing that weight of milk. The latter is calculated by USDA using a notional national feed ration based on alfalfa hay, corn silage, grain and soy bean meal, at the price levels current in the mid West.

All dairy operations producing milk commercially are eligible to participate although joining the scheme is optional. Calculations are based on individual producers' production history. For the first year production history was defined as the highest figure produced during any one of 3 qualifying years. After that adjustments will be made by the government based on the national average growth in total US milk production. Growth by individual producers which is beyond the national average increase is not protected by the program.

Producers will be able to protect from 25% to 90% of their production history, according to choice. They can select margin protection coverage from \$4 per hundredweight (100 lbs – the unit by which American farmers sell their product) of milk sold, to \$8 per hundredweight, and premiums are charged accordingly.



Figure 5: MPP Margin and Coverage Levels, 2004-2015. Source: <http://www.futurefordairy.com/program-details>

All producers pay a \$100 annual registration fee. Basic margin coverage of \$4 per hundredweight is free. Above the \$4 margin level, coverage is available for varying premiums. Premiums are fixed until 2018. (<http://www.futurefordairy.com/program-details>)



In my opinion this scheme brings stability to the US dairy industry and is adoptable by, and would be suitable for adoption by, the EU. This would encourage farmers to invest in their businesses, as they would have a more stable and reliable income. In turn this would promote the dairy industry as a long term and profitable career option, attracting higher quality entrants and progress through the industry.

7.viii. Research

Research in the UK needs to be more producer-led rather than led by the wider industry, eg pharmaceutical industries and feed companies. The UK Levy Board's research policy, as written into their core documents, is based on market failure. This has to change to allow the industry to self-fund research which profits the whole industry, rather than just individual companies selling products to the wider industry. To facilitate better research, recruitment of high quality students to lead future research must start immediately. We have a missing generation of science-based researchers within the dairy teams.

Dairy NZ (the New Zealand Levy Board) are actively promoting agricultural science as a further education option and future career. They offer schemes such as gifted and talented high school students being able to attend ag science seminars and interactive activity days. These students are chosen by the school, on a competitive basis.



8.0. Education

8.i. Continuous personal development (CPD)

During my travels I found that the majority of agricultural businesses were lacking in dedicated CPD. There were exceptions but, as an industry, we need to become more professional and carry out formal staff reviews annually. The training wants and needs of each member of staff should be considered, *vis a vis* the needs of the business. Staff training in other sectors of industry typically varies from 3% to 15%. As dairy businesses we need to set budgets for staff training and make sure that they are used efficiently.

Continuous training improves the knowledge of the staff attending the courses and also gives them the opportunity to network with others in similar jobs.

One of my findings was the lack of support towards CPD amongst, particularly, family businesses. Many were not subscribing to any available courses, or reading, or participating in discussion groups. Their attitude was that *“my feed/machinery rep will give me the best advice as long as we buy their products – and it’s **FREE!!**”*

A clear example of how we actually learn is shown in the chart on the next page. It shows how to achieve a lasting effect from learning experiences.

It is vital that lessons delivered have a lasting effect as many that are free, state funded and delivered by highly paid consultants, are treated as a day away from the business with little long lasting benefit.

Government will not keep on funding this type of CPD long term. It wants more long term benefits for the funds provided.

The cone of learning (*on next page*) clearly shows the lasting benefits of active learning when compared to passive learning.

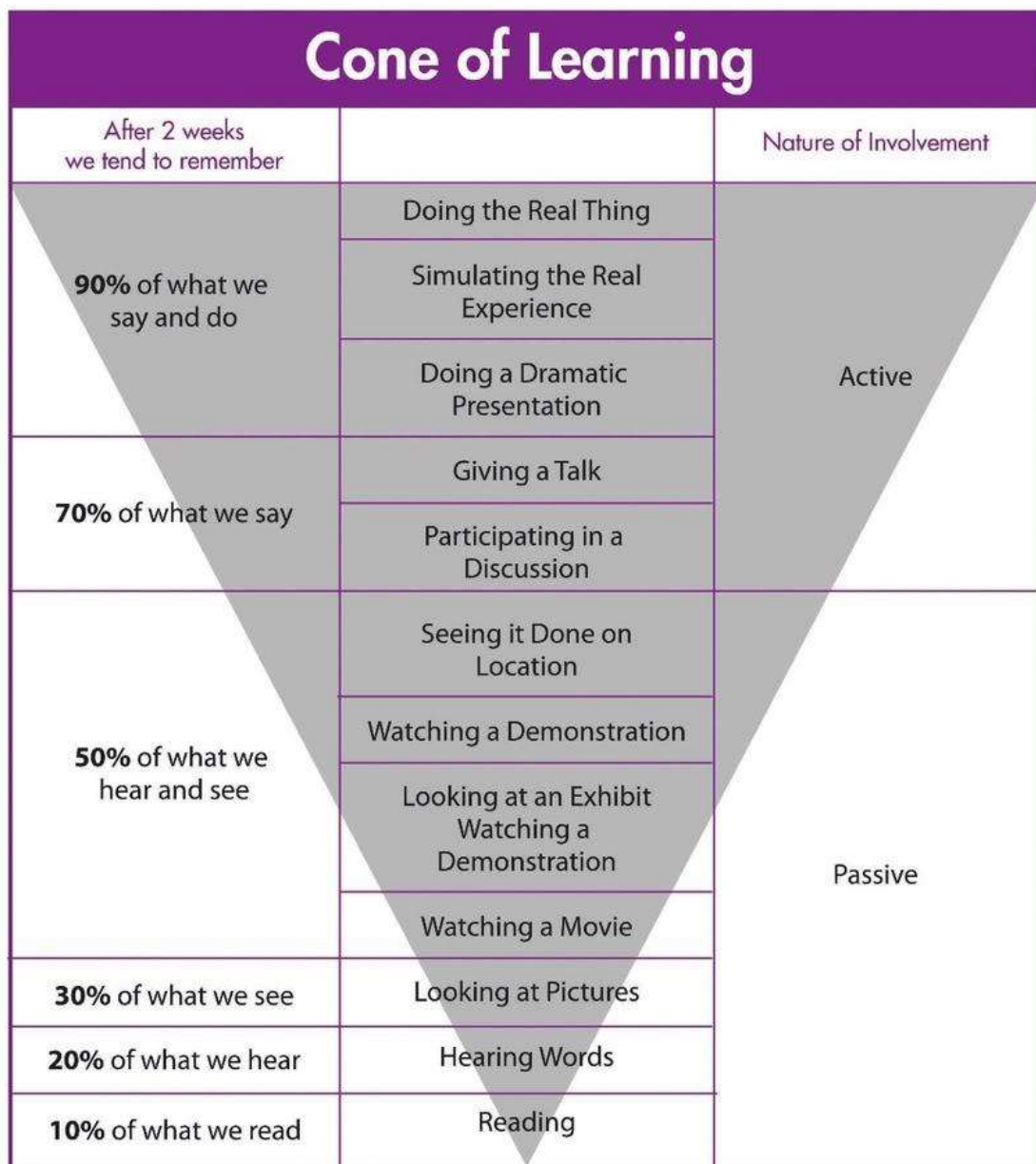
8.ii. Making a career choice

Why do so many children - when questioned at career fairs - have no idea what they want to do?

Is this down to the education system with schools producing what they want, rather than what a country and its population need and want?

Why do so many boys want to go into the sport or music industry, and girls want to go into the beauty industry?

Is the culture of TV reality programmes and 24-hour sport defining what is good or bad? However I must admit that the health and beauty industry employs large numbers of people.



Source: Cone of Learning adapted from Dale, (1969)

8.iii. Secondary education

Secondary education, I believe, presents the agriculture industry with a huge opportunity to promote itself. The age group of 13 -16 is probably the most receptive to the opportunities within the agriculture sector. They will be receiving careers advice and attending careers fairs. Until very recently, with the launch of Bright Crop, agriculture has not been proactive in this sector.

Bright Crop is an initiative which is well funded by the wider agriculture industry and promotes the wider job opportunities, from milker to grain trader. Ambassadors from the wider industry are given

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training to speak to schools, colleges and other groups, promoting these opportunities. (www.brightcrop.org.uk)

The need for these ambassadors was clearly shown when the opportunity arose for agriculture to take part in The Skills Show in Cornwall, UK, an area where 10% of the local population is employed in the food industry. Initially agriculture was not going to be formally represented.

A theme of high tech was adopted with robotic milkers, drones monitoring crops, and electronic identification all being showcased. Promoting the need for people leaving school in the next few years will be the business owners, managers, and researchers that will be feeding the 9 billion inhabitants on earth by 2050.

The most-asked question to the ambassadors at this event was ‘What is agriculture?’ This represents a glaring failure in what we as an industry are doing at promoting ourselves. This must change.

The schools are desperate for help. They need case studies from business as well as careers advisors. The opportunity to share knowledge with the next generation of workforce will be invaluable.

We as an industry must offer help to schools and colleges to change people’s perceptions of farming. This is probably quite easy at present due to TV programmes such as Jimmy’s Farm and Lambing Live. Agriculture is again on the public agenda. When interviewing secondary school teachers the comment constantly heard was that agriculture has been removed from science subjects and reduced in the geography syllabus. It will take alternative thinking to engage with teachers and governmental education departments to bring food and agriculture back into education.

8.iv. Further education: apprenticeships/university

The growth of apprenticeships and practical learning can only be a good thing as it gives opportunities to learn in a different environment from the classroom, where young people are schooled and judged to succeed by passing exams and conforming to a learning framework. However, apprenticeships should not only be for the lower achievers in the school system: they are also suitable for some of the high achievers who would like work-based training.

Perhaps apprenticeships could be the precursor to university entrance. All too often university graduates leave with very few practical work skills, expecting high pay for no experience, only to gain employment and then decide that the chosen career is not for them. If practical apprenticeships were undertaken young people would have a clearer understanding of their future career.

University

University courses are now viewed as almost mandatory for entrants into farm management, and the need for farmers to be qualified to a chartered status is perhaps a dangerous path. The constant need to learn is undeniable but is the certificate/degree/masters or doctorate really necessary? Many of the world’s most successful business or political leaders - for example Steve Jobs of Apple, Richard Branson of Virgin or even Winston Churchill - dropped out of formal education at a comparatively early age.



The whole education system understandably promotes itself as, without students, it is out of business. Often we forget that universities are in business – the business of education.

There will always be a need for university-trained students but the need for practicality within courses is vital especially with agriculture. The connection between learning, science and farm must be kept as short and level as possible with a realisation that no sector is better than the other.

The UK government change of policy over the last couple of years is perhaps heralding what many business owners have been saying for many years, calling for renewed enthusiasm for apprenticeship schemes and more vocational courses. The perhaps too-long held view that university was the correct route for the majority of school leavers has been the preferred message from the secondary education system, as all teachers had followed that route themselves. The members of panels of advisory committees consist solely of university-educated people. Such panels need to be rebalanced, bringing in the relatively informally-educated business leaders to help get a more balanced view.

The average agricultural course is targeted at the future manager with the students' expectation that they are qualified to manage a farm business immediately they leave the university gate. Of course some would be capable, but not all.

A suggestion made to me by an interviewee was that students on leaving secondary/high school should take up an apprenticeship or work within a field that interests them. If after two years the sector still excites them as a potential career then university would be considered. The accompanying debt that most will undoubtedly end up at the end of a university course may be less than a straight-from-school student would accrue. Hopefully a more mature student will have saved some money whilst engaging in work in the outside world, perhaps gaining a work ethic in the process.

No agricultural university/ further education establishment that I questioned in the world could give an answer to the percentage of students that remained long term within the wider agriculture or even food sector. This I feel is a problem and perhaps detailed reviews should be undertaken to show evidence that the courses offered are actually delivering for the farming sector long term, and not just keeping the business of further education prospering.

An example from my study is from Ireland where a specific dairy management degree has been developed, with a non-negotiable, practical element to the syllabus. Specifically this is to produce the next generation of managers, and is in response to the future industry plan that has been driven from within and readily adopted by government, research and further education.



9.0. Overseas initiatives

9.i. NZ

In New Zealand, agricultural university students have to give something back to their earlier education by presenting to high school children. This promotes not only universities but also the job opportunities that are available within the agriculture industry. This is a great programme as it uses a slightly older cohort of students who will have better connection with the high school students than older farmers/industry specialists - who would be viewed as putting across the view of parents and must therefore be revoked at all cost!

NZ has ambassador schemes similar to the UK Bright Crop initiative. There are 100 ambassadors whose expenses are covered, unlike the Bright Crop policy.

DairyNZ Producers, the levy board equivalent, had full time education officers with expanding initiatives. There were science days for gifted and talented science students from high schools, with involved schools nominating two top students to attend practical days' learning, as well as a little stealth promotion of agriculture and research potential occurring within the day.

Secondary education was seen as an essential area to promote agriculture, and this was the same in Australia.

9.ii. Australia

Here I found many great initiatives, particularly Cows Create Careers run by Dairy Australia where the rural schools curriculum for Year 9 students in south west Victoria was based around dairy farming, with science, geography, history and maths all taking cows as their theme. (www.dairyaustralia.com.au)

I met Lynne Strong, an incredibly enthusiastic person and winner of the Bob Hawke Landcare award. She has been instrumental in starting The Art4Agriculture scheme and the ArchiBull Prize where children decorate life size cow models with a sustainable agriculture theme. As well as being identified as young farming champions who are then remunerated to promote agriculture, these young people were viewed as most important in getting the message of sustainable agriculture across. The champions were almost always under 35 years of age in order



Figure 6: Lynne Strong at home



to establish a better connection to youngsters. The Art4Agriculture scheme works closely with Generation Next, an Australian organisation that connects with teenage Australians to prepare them for the emotional whirlpool of their future social lives. (<https://art4agriculturechat.wordpress.com/>)

When visiting an old friend who had emigrated from the UK many years ago I saw their children doing homework which had many questions involving an agricultural theme. For instance a maths question was based on a farmer spraying his crops with glyphosate to prepare for a cleaner, healthier crop - at such and such a rate over so many hectares.

9.iii. Canada

The “Agriculture More Than Ever” campaign (see <http://www.agriculturemorethanever.ca>) is providing and promoting a positive voice for agriculture, supplying resources such as Facebook covers, Fact photos and info graphics, and merchandise from cups to vehicle decals. Power points are available to work from.

To reach its full potential agriculture needs everyone in the industry to speak up and speak positively.

The campaign “Agriculture More Than Ever” states:

Guiding principles

“We believe agriculture is an amazing industry that needs to be better understood, recognised and advanced, and we’re committed to doing something about it.

We believe in profiling a realistic picture of agriculture. There will always be challenges, but let’s also talk about our optimism, the opportunities available and our positive impact.

We believe agriculture needs more champions. Improving perceptions of Canadian agriculture will take time and active participation by those who live and love it every day. We encourage contributions – large and small – from like-minded individuals and groups across the country.

We believe that, to change perceptions, everyone in agriculture needs to engage in positive conversation, fill in information gaps, respond to misguided perceptions and tell success stories about Canadian agriculture with pride, passion and accuracy”.

9.iii.a. AGforLife or Agriculture for Life

Is an Alberta-based not-for-profit charity promoting a better understanding of agriculture in Alberta, and what it does for the economy and culture. (www.agricultureforlife.ca/)

It targets schools to increase awareness of the opportunities in agriculture. It was connecting with 20,000 students annually, targeting 30,000 and realising that 100,000 *should* be reached.

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Volunteers are going into schools promoting agriculture and other formal agriculture was on the syllabus. The scheme was well funded by rural companies including oil companies. The need to be well funded was critical as other industries were ready to take up space if AGforLife reduced their presence.

There is a disconnect between agriculture and everyday culture in the UK. Agriculture needs to play a bigger part in the nation's culture. Yet this can be achieved by small steps as simple as homework questions based around agriculture.



**Figure 7: Arnon at the Harduf organic farm in Israel fully engaging the audience
- away from cows - talking about energising people as well as water**



10.0. Discussion

I found many points in my study absolutely fascinating and I would like to share some of these with you.

On the same day that I had toured a mega dairy which milked 8,000 cows in Minnesota I stood in a field watching an Amish farmer drilling oats with his horse-drawn seed drill. I realised that the only noise I could hear was the singing of birds and the small stones rattling through the drill.

It was then that it dawned on me that to grow the best crops you had to use the highest quality of seed rather than the chaff. The quality seed with careful attention will yield a better crop, with higher germination rates.

A perennial crop like grass would last many, many years if not abused by trampling; if it was given time to rest and enjoy the sun and the rain in order to recuperate, and regularly fertilised and kept disease-free.

The above principles of producing a high quality grass ley would be quite easily adapted to retaining the best staff: if the right working environment for staff is developed on farm; if the future development of staff is budgeted into cashflows; if time to rest is remembered and enough other people are around to share the joy of being together.

If we are to encourage new people into the industry the preparation and then the rapid execution of actions to get people to realise the potential within the dairy industry, starting from a lower ranking job on farms, is paramount.

We, as dairy farmers, for the most part breed cows for future use in our business; caring and nurturing them to later reap the benefits. We must do the same with staff.

The development of both staff and business owners must be recognised as being among the factors of success.

This also applies to members of staff. The “noise” of peer pressure to conform to the recognised norm needs to be broken.

If the dairy industry could adopt what leading companies like Google and Wegmans have espoused - the appreciation of the individual within the overall workforce – they would discover that different strengths when combined deliver a greater result than the expected sum.

Talented employees stay because they are:

- Well remunerated
- Mentored
- Inspired
- Empowered



- Challenged
- Involved
- Appreciated
- On a mission

(<https://twitter.com/valaafshar/status/532156468615999489>)

In almost all the dairy businesses I visited, the health and welfare of the cows were far more easily conveyed than the health and welfare of the human capital employed.

Are cow beds more important than a dry comfy bed for a member of staff - to make sure they are rested and ready for work the next day?



Figure 8: It is vital that the wider industry helps engage the next generation by making technology fun



11.0. Conclusions

1. The best businesses value their workforces and treat them accordingly.
2. The UK has the potential to be a dairy powerhouse once again if, as an industry, it develops a cluster of strength which in turn will attract people.
3. Success attracts people; constant negativity repels.
4. To harvest the best crop you have to start with the best seed and the best seedbed. Managing people and managing the workplace are no different .
5. Farmers as well as the wider dairy industry must engage with - in particular - secondary school teachers and pupils. This is when most early discussions regarding careers begin.
6. Agriculture needs to become part of main stream education curriculum

IT'S NOT REALLY ABOUT THE COWS AT ALL

IT'S ALL ABOUT THE PEOPLE



Figure 9: We must make people ask the question for themselves



12.0. Recommendations

1. Be proactive. Engage the general public. Don't be afraid to show them around the farm.
2. Offer to help your nearest secondary school or be brave and invite an inner city school on farm. Offer to cover transport costs: it might just be the cheapest job advert you've ever paid for.
3. Get off farm and look at how other businesses manage people.
4. Stop moaning. As an industry times are tough. Travel allowed me to appreciate how lucky British farmers are, living in relevant opulence compared to the majority within the world population. The image of farmers demonstrating can perhaps work short term but, to attract high quality people, we must be seen as a successful industry with a long term future.
5. Run your business by making use of natural advantages first. Then it all becomes easier.



13.0. After my study tour

Since my study tour my personal health issues have somewhat changed my thinking – along, of course, with my Nuffield Farming experience. A major heart scare focuses the mind on the important things in life. A little more time off has been taken with family, and the realisation that we have one chance at life was brought home to me very clearly.

The chance to help develop both people and the industry has become a more major interest of mine now. My continuing role with DairyCo driving relevant research, coupled with my Nuffield Farming Scholarship, has led to my appointment to a role on the Future Economy Strategy Board of the Local Enterprise Partnership for Cornwall and the Isle of Scilly.

An invitation to join South West Mentors, a voluntary scheme which uses established business owners to help to mentor new or struggling businesses to develop and flourish is extremely rewarding.

I find opportunities very hard to pass me by so, while undertaking my study tour, the chance to buy two neighbouring farms came up and actually doing a little work, and getting my hands dirty, is good for the soul

I persuaded the NFU and other farming businesses to get involved in the Careers Fair in Cornwall where, without our initiative, agriculture wouldn't have been represented.



**Figure 10: The Brewer family enjoying some time off.
Emily, Claire, myself and Rebecca**



14.0. Executive summary

As dairy farms have grown in unit size the need for labour has grown likewise, but the quality of this labour has changed as technology increasingly takes over robotic-like work tasks.

The need to increase the capability of the labour unit is ever greater.

The task of this study was to find best practice among employers in attracting and retaining staff, starting from a technician base: whether this best practice was achieved by farm system, man management or industry image.

The countries visited were chosen or recommended to give the widest range of dairy systems as well as world leading businesses. My research covered positive to negative attitudes, from highly controlled economies versus free trade, as well as from almost totally staffed by migrant labour to being staffed with entirely indigenous labour.

As an industry, dairying should question the use of migrant labour expected to perform as manual robot workers.

The UK has recently called for more vocational learning and has proclaimed a need for 60,000 jobs in agriculture in the next 5 years. The dairy industry must see this as an opportunity to source future technicians on farm.

A key finding of the study is that all successful businesses utilise their natural competitive advantages: be those climate, soil, proximity to market, or availability of cost-effective labour.

The capability of business owners to develop people management skills is often outstripped by the rate at which their businesses grow.

The cost to businesses of a lack of human resource management ability is largely hidden and just accepted. The loss of skills developed on farm by staff and loss of this knowledge from businesses has to be addressed by the industry.

The lack of interaction between agricultural businesses and secondary education in the UK has led to a disconnect from a public which is actually most receptive and actively looking for careers.

The quality of future dairy owners and their staff will make EQ equally as important as IQ

New staff must be treated as a renewable resource, not as a mine - which will become exhausted.

Developing strategies is all good and well, but action is what achieves results.



15.0. Acknowledgments and Thanks

I would like to thank my two main sponsors, The Dartington Cattle Breeders Trust and The Trehane Trust. They have provided me with an opportunity of a lifetime.

I would also like to thank Bonanza Calf Nutrition for their generous help to enable me reach a little further around the globe.

Of course my gratitude and thanks must be given to all my hosts for both visits and beds along the way. Many also gave me extra leads and contacts as I travelled. It made the whole Nuffield Farming experience a far fuller one than I could ever have imagined.

My Nuffield 2013 Cohort is constant source of friendship, jollity and positivity via all means of communication: from old fashioned cups of tea around the table to via the internet.

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And finally and most importantly of course, Claire, Rebecca and Emily for all their support during the whole of the Nuffield Farming experience.