



Drivers of on farm compliance

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Executive Summary

Meeting the requirements of compliance is an area that farmers struggle with. They are great at working the land and with animals and get frustrated at having to slow down to complete what is sometimes seen as needless paper work. Compliance in the agricultural sector is only going to increase and become more complex. Local communities and customers are demanding ethical environmentally sound products. They want safe, healthy, affordable food and don't want the production of that food to be at the expense of the environment or animal welfare. The social licence to operate is becoming more important as communities are expecting more from agriculture. If the agricultural industry doesn't act quickly to the pressures of the community, then regulation will only continue to increase.

Health and safety regulation changed relatively recently in response to poor health and safety statistic in the agricultural industry. The tide is changing but slowly, there are still those around with antiquated views who see health and safety as PC rubbish. You only need to scroll through the NZ Farming Facebook page for examples. Agricultural leaders need to take a hard line in this area, call out poor behaviour and distance themselves from supporting those who continue to display it.

To help farmers navigate the compliance minefield we need to understand what it is that drives them to comply. If we understand that, we will be in a better position to help farmers get up to standard and move beyond compliance. Moving beyond compliance and proving that farmers are meeting their obligations will slowly build the trust back within the local market.

Profitability will always come first in a business. This is not greed, it is economics. If a business does not turn a profit or break even it will not survive. Farmers need to be shown that compliance doesn't have to be a cost, and in fact can improve profitability. All the farmers surveyed saw each area, Environment, Product Quality, Health and Safety and Animal Welfare as very important. the desire to do the right thing is there so If we can show how complying in these areas will help in running a profitable business, we should be able to help them progress. Desire and importance alone is not enough to drive compliance. Farmers are busy, and tasks are constantly getting prioritised; tasks where a farmer can directly link it back to profitability and success are always going to move to the top of the list.

There are three ways that farmers can be encouraged to comply with regulation, farm accreditation programs that will give them preferred access to market and premiums. Education around how complying can make their businesses more profitable and reduce their risks and lastly, negatively hit their profitability with fines and tighter restrictions. The first two options will be more successful. Option three doesn't promote cultural change and relies on the regulator constantly looking over the farmers shoulder, as soon as the regulators back in turned behaviour will revert.

As an industry we need to move quickly to implement change and always be looking for better, more efficient, cleaner, safer and kinder ways of farming. We shouldn't wait to see what society gets outraged about next and then respond. We need to predict what might become a problem and innovate around that now. We need to choose to change not be forced to change.

Forward

I was motivated to undertake this research due to challenges I currently face in my role as customer support for OnSide. OnSide have developed a risk management software system. One of the challenges we face is the lack of importance that people place on having a robust health and safety systems. I wanted to get an understanding of what it is that drives people to comply with regulation. If we can connect with that then we will be better placed to help people meet their compliance obligations. I have looked at four areas of compliance, Health and Safety, Environment, Animal health and Welfare and Product quality. I selected these areas for very specific reasons. Health and safety due to my role at OnSide, Product quality as it is an area that farmers perform highly in. Environment as It is such a contentious issue now, if we don't make progress quickly the licence to operate could be lost. This reason also rings true for Animal health and welfare, with the likes of SAFE and PETA farmers need to ensure that they are treating animals with the utmost respect and care always, or unfortunately face increased scrutiny and negative press.

1. Introduction

Regulation in the agricultural sector is increasing. If farmers don't be seen to comply, and even go beyond compliance, they run the risk of losing the social licence to operate. Not long ago everyone in town had family or friends who had a farm. They were closely connected and there was an appreciation and understanding of what life was like on the family farm. With an increase in urban population and in large scale farms¹ the division between town and country is increasing. Campaigns around dirty dairy, Green Peace, SAFE and PETA are helping to paint agriculture in a poor light. Pollution of water ways and a perception of the wealthy farmer who takes at the expense of the environment and animal welfare is only going to make social licence to operate harder to hold. The changing landscape of areas like Canterbury which where once, dry stock or cropping farms concern residents who are frustrated by polluted water ways. It hasn't been long since Cantabrians have seen the landscape change from predominantly cropping and sheep farming a landscape of patchwork quilt paddocks broken by tree lines. This was an environment where they knew the local farmer and swam in the rivers and streams in the summer. 15 years on, Canterbury is covered in green circles and cows while tree lines are being removed for irrigation, big commercial farming operations and people they don't know. It's easy to see why they think 1+1+1 = 3. They see more cows, irrigation and polluted water; therefore, it must be the dairy farmers that are causing the pollution.

SAFE and PETA are regularly releasing campaigns that paint agriculture in a poor light. Recently we saw PETA campaigning against the wool industry again with the "I would rather go naked than wear wool" campaign². With famous people backing these campaigns, a new reliance on social media for news and information and a distance from agriculture it's easy to see how people start to believe and act on these messages. As farmers and people close to the product we know it's an amazing product with properties that can't be beaten. Farmers need to ensure that they enforce animal welfare standards to the highest level and the industry learns to effectively sell that story. The industry can't afford to have cases like the bobby calf tapes recorded by Farmwatch³. Every time SAFE, Farmwatch and PETA do a campaign it plants that extra seed of doubt, that doubt can lead to public pressure can result in more regulation. The bobby calf issues and views around inductions are great examples of that public pressure turning into regulation.

¹LIC & Dairy NZ (2015-16) New Zealand Dairy statistics

² PETA (2017) Alicia Silverstone would rather go naked than wear wool. https://www.peta.org/videos/alicia-silverstone-rather-go-naked-wool/

³ Piddock G (2016) Farmwatch releases more videos of abused NZ Calves. Stuff http://www.stuff.co.nz/business/farming/85719701/more-safe-footage-emerges-of-abused-calves

Health and safety statistics in the Agriculture industry has historically been poor. Because of this the recent regulation changes saw agriculture put under the spot light. With an average of 20⁴ people a year being killed on farms in New Zealand, 175,000 days of lost or limited productivity, which costs the industry \$26Million⁵, it's a huge problem. Views around the importance of health and safety are slowly changing. There are a group of forward thinking farmers who see it as a positive to put people first, ensuring that they have the right things in place to keep themselves and their teams safe. Unfortunately, there is still a large group out there that think health and safety is a load of rubbish and something that is being done to farmers. As one commenter on NZ Farming said "It's just cotton wool bullshit. It(s) people that have lost all their common sense because they are so used to being wrapped up in cotton wool"⁶. These farmers see themselves as victims of regulation and feel that common sense should be enough. Unfortunately, the statistics show that a large proportion of fatalities happened to people over the age of 55⁷. This negates the common-sense argument, as surely those who have been in the industry for the last 30+ years have a high level of common sense and experience relating to agriculture and the task at hand.

New Zealand agriculture is seen to punch above its weight with product quality and production. It is something that New Zealand farmers are proud of. New Zealand's pasture based production system, and temperate climate means that famers can produce a high quality, premium grass feed product with low inputs. This grass fed, clean green image is what is used to market and sell agricultural products on the world stage. New Zealand agriculture need to ensure that the clean green part of that image isn't lost due to poor environmental performance.

Four big areas where regulation plays a large role are environment, animal health and welfare, health and safety and product quality. Pastural agriculture is made up of 1000's of individual business spread through the whole of New Zealand. Most of these farms are a long distance from the regulator and often plagued by poor service and connectivity.

So, what is it that drives compliance in pasture based agriculture? The aim of this project is to help answer that question. Once we know what drives compliance we will be better placed to help farmers to meet their requirements and start to move beyond compliance. Moving beyond compliance is where we will make grounds on the social licence to operate.

Social licence is an important factor to consider as it is already influencing how we operate. Social licence is a community's acceptance and expectation of how a business operates, if businesses don't respond to societies expectations it can result in an increase of regulation as regulators and politicians respond to societies demands⁸. Gunningham Et al (2002) looked at social licence around environmental protection in relation to saw mills. One of the things that they found was the variation in the pressure of social licence. Saw mills that where closer to large cities with high visibility where expected to operate at a much higher level environmentally than a sawmill run further away from towns, or in isolated areas.

Farmers must take charge and set the expected standard, or risk being dictated to with more stringent regulation if they don't meet society's expectations. With social media farmers are closer to their market than ever, those on main roads and close to town must be even more careful on how they manage their farms. Recently we have seen how common practice can be seen in a negative light, in southland someone rang the police as they saw a cow "tied to a tractor". The cow was getting lifted after having some complications calving. What might seem normal practice and humane to farmers can be interpreted very differently by people who don't understand farming.

https://www.facebook.com/NZFarming/posts/719602954885555

⁴ Work Safe website. http://www.worksafe.govt.nz/worksafe/information-guidance/guidance-by-industry/agriculture.

⁵ 2013 data from Safer Farms website. Why be safe. http://saferfarms.org.nz/why-be-safe/

 $^{^{\}rm 6}$ NZ Farming Facebook post (2017) Interesting take on safety...

⁷ Work Safe website http://www.worksafe.govt.nz/worksafe/research/health-and-safety-data/workplace-fatalities/fatalities-summary

⁸ Gunningham N, Kagan R.A., & Thornton D (2002) Social Licence and Environmental Protection: why businesses go beyond compliance. Centre for Analysis of Risk and Regulation, London School of Economics and Political Science.

⁹ Stuff (2016) Is it normal to tie a cow to a tractor. http://www.stuff.co.nz/business/farming/dairy/83452988/Is-it-normal-to-tie-a-cow-to-a-tractor

Areas that might have an impact on compliance are people's personal values and beliefs, the pressure on them to comply from external agencies, pressure from the processor of their product, pressure from society and welfare or activist groups, incentives and awards for compliance might also play a role. The fear of prosecution might be a driver for some farmers and others might be driven by profitability. The Two areas that are going to be looked at for this study are personal values and beliefs and external pressure to comply.

2. Methodology

2.1. Collecting responses

A survey was conducted using Survey Monkey. Responses where anonymous and voluntary. Participants were found through word of mouth and by participants sharing the survey with their friends and colleagues.

At the introduction of the survey, participants were given a purposefully brief introduction to what the research paper was about to reduce bias in answers. "The focus of my paper is understanding the relationship between personal values and beliefs, external pressures to comply and levels of compliance. There are no wrong or right answers." All answers were anonymous, although they had the opportunity to leave their email address if they would like a copy of this paper.

The survey was made up of 48 questions with two variations of the survey. One for Sheep and beef farmers and another for dairy farmers.

The survey was broken into four sections. Section 1,2 and 3 looked at Four different compliance areas, Animal health and welfare (AHW), Product or Milk quality (PQ), Environment Management (EM) and Health and Safety (H&S). Section 4 asked for some information to understand the size and scale of their business.

Section 1 looked at these four areas and the respondent's personal beliefs around how important each area was. Participants were asked to not think about the impact the questions had on their business success or the effect of regulation but to just respond with how important they personally believed something to be. They responded to the questions on a sliding scale, 0 = Not important to 100 = Very important. There were 16 questions in this section, four questions relating to each compliance area, AHW, PQ, H&S, EM.

Section 2 measured the four areas and how much external pressure there was to comply. In this section the participants were asked to think about how closely they felt they were monitored and asked if they ever received any awards or premiums for high performance in any of the four areas. There were a mix of questions, one question for each area on a sliding scale 0 = not at all to 100 = very closely. One tick the box question for each area with five responses to choose from, this question was looking at how often their compliance level was assessed or looked at. The last two questions where select all that apply questions, relating to premiums and awards they may have received.

Section 3 looked at their level of compliance over the four areas, AHW, PQ, H&S and EM. There were four questions for each area where respondents were asked to select the closest option.

The survey took participants on average 8mins and 21seconds to complete. There were 17 responses to the sheep and beef version and 18 for the dairy version. Incomplete surveys where removed leaving 12 completed responses from sheep and beef farmers and 16 from Dairy farmers.

Sample size is a limitation to this research, this means it is hard to say if the results are indicative for the wider industry.

2.2. Analysing results

Section 1 results: Each response was divided by 100, the four questions form each area where grouped and added together, this gave a number out of four. For each of the four areas AHW, EM, H&S and PQ. That result was then divided by four to get the average for each area. This number was there rating for their Intrinsic Values (IV) for each compliance area.

Section 2 results: The sliding scale questions where divided by 100 to give an answer between 0-1. The tick box question was scaled with the most regular assessment of their compliance receiving a 1 and the least frequency of assessment receiving a 0.2. The final two questions received a 1 for each area an award or premium had been received or a 0 if they hadn't. This gave four numbers for each area, AHW, PQ, H&S and EM. The four numbers where then added together and divided by four. This gave the rating for the External Pressure (EP) for each area.

Section 3 results: All questions in section 3 were multi choice. Responses scaled from fully compliant, through partially compliant, down to not compliant. Fully compliant responses scored a 1, scaling down depending on how many options there where to select from, with no compliance getting the lowest score. Again, there were four questions around each compliance area, PQ, AHW, EM and H&S. These four results where added together and divided by four, this gave the Compliance Level (CL) for each area.

Outliers where removed from the data set, this was calculated by determining the interquartile range. The interquartile range was the multiplied by 1.5 and added to the upper quartile to get the upper limit for each data set and subtracted from the lower data set to get the lower range.

One set of results was removed from the product quality data set, 2 from health and safety, none from environment and two from animal health and welfare.

3. Results

As shown in Table 3.1 there was a moderate correlation between intrinsic values and the level of compliance for product quality. This means that the more important an individual thinks product quality is the more likely they are to comply with regulations imposed in this area. There was also a weak correlation for product quality between compliance level and external pressure to comply.

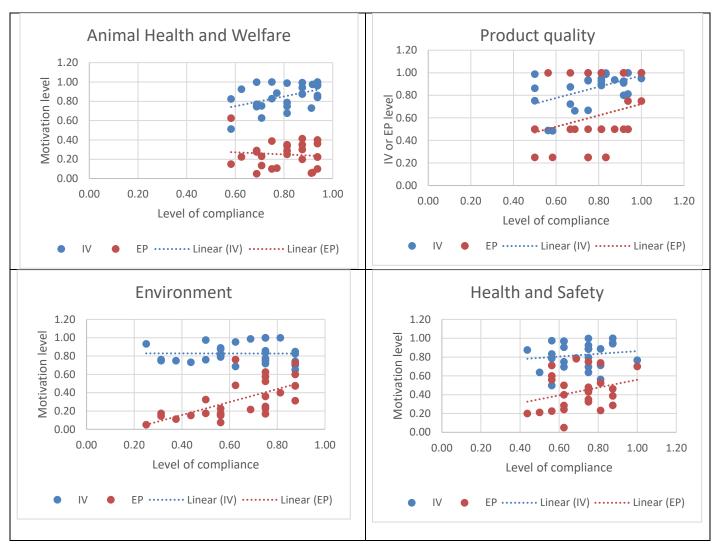
There was a moderate correlation for environment between compliance and external pressure. The more often peoples environmental plans were view and assessed or they received premiums or awards due to environmental performance the more likely they were to be meeting their compliance requirements.

There was a weak correlation for Animal welfare between internal values and levels of compliance. Health and safety also had a weak correlation between external pressure and compliance.

Table 3.1 Correlation between level of compliance and intrinsic values or external pressure

	Product quality		Animal Health and welfare		Environment		Health and safety	
Compliance	Internal	External	Internal	External	Internal	External	Internal	External
level	Values	pressure	Values	pressure	Values	pressure	Values	pressure
Correlation	.51	.27	.45	09	-0.01	.65	.14	.28

Table 3.2 Correlation graphs
Graphs show the relationships between compliance and the two variables, intrinsic values (IV) in the blue and external pressure (EP) in the red with correlation trend lines included



50% of sheep and beef farmers have never had someone look at their health and safety plan or monitored their progress towards compliance, Table 3.3. Of the remaining 50% their plans are only being reviewed on an annual basis. Dairy farmers have their health and safety plans viewed more than sheep and beef farmers with 25% having never had their plans reviewed, 56% have them viewed annually, leaving 19% that get their plans viewed more regularly.

Environmental management was the next lowest area regarding external monitoring of compliance. 25% of sheep and beef farmers have never had their environmental plans and progress reviewed. Of those who have had them looked at 58% where looked at on an annual basis leaving 17% who get their plans and progress reviewed more frequently. 50% of sheep farmers said they didn't have a plan in place to manage their environmental impact. This is higher than those who have had their plans and progress viewed. So even though some farmers have been monitored they have still done nothing in terms of putting a plan in place. Of the 50% that don't have a plan half of those have had someone assess their environmental performance.

19% of dairy farmers said no one has ever looked at their plan, 62% saying their plans where viewed annually. Leaving 19% who have their plans reviewed more frequently. Only 6% of dairy farmers reported not having a plan in place to manage their environmental impact.

Product quality and animal welfare plans and progress, was much more closely monitored than environment and health and safety. Sheep and beef farmers seem to be monitored less frequently than dairy farmers in these two areas. 94% of dairy farmers said their product quality was monitored more frequently than annually, 75% stating that their product quality was measured daily. 50% of sheep and beef farmers said their product quality gets monitored at least monthly. 87% of dairy farmers animal health and welfare plans get viewed at least annually with 56% stating their plans get viewed and at least every six months. 17% of sheep and beef farmers stated that their animal health and welfare plans had never been viewed while, 17 % said they were viewed every few years, 66% said their plans where reviewed at least annually.

Overall Dairy farmers where more likely to have plans in place for managing compliance in each of the areas and these plans where more likely to be viewed and assessed than dry stock sheep and beef farmers.

Table 3.3 Compliance plan and progress review information

Respondents who had never had someone externally monitor their plans and compliance progress for each area.

	Reponses	Product	Quality	Animal health and welfare		Environment		Health and safety	
Sheep and Beef	12	2	17%	2	17%	3	25%	6	50%
Dairy	16	0	0%	0	0	3	19%	4	25%
Total	l 28 7%		7%		21%		36%		

Table 3.4 Respondents who don't have a plan in place to manage compliance.

Respondents who didn't have a plan in place for the respective areas

	Reponses	Product	Product Quality Animal health and welfare		Environment		Health and safety		
Sheep and Beef	12	5	42%	1	8%	6	50%	1	8%
Dairy	16	1	6%	3	19%	1	6%	2	13%
Total	28	21%		14%		25%		11%	

Product quality had the highest external pressure on farmers to comply, as seen in Figure 3.5. Product quality got checked every time it was processed, and results were feedback to the farmers quickly. This means that they could quickly and easily see if they were meeting requirements and adjust as they go. This constant feeding back of information to the farmer would help in bringing it to the front of mind, impacting on the importance they place on quality. This is also where farmers see instant financial benefits from producing high quality products. This would also help in increasing the importance that is placed on product quality, as to remain farming they need to stay financially viable.

The area that had the best rate of compliance was product quality, this was the area where both intrinsic values and external monitoring were highest. Farmers tended to view each area as important as you can see by Figure 3.5 it is a relatively straight line. This even level of importance didn't play out when looking at the level of compliance in each area. So, was the importance they place on each area the driver for compliance? These results would suggest not.

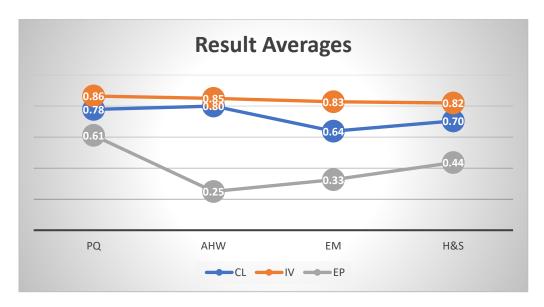


Figure 3.5 Average of results for each measurement area.

4. Discussion

If the importance farmers placed on an area isn't what drives compliance and level of external monitoring only seems to have an effect when it is measured at every point of sale, what is the main driver of compliance?

Farming businesses are so far away from the regulator and there still seems to be this, "she'll be right", and the "number 8 wire" mentality which can be useful in day to day management, but detrimental to long term progress, after solving today's fire it's business as usual. Could it be profitability that drives compliance? The two highest areas of compliance can be easily linked to profitability here. If you have poor animal welfare, you have a poor product, which leads to poor profitability. Farmers might value environmental protection and health and safety but when times are busy, and things must be prioritised, tasks that maintain a profitable business will always be pushed to the top of the list. The "nice to have" items like tree planting and chemical storage systems get demoted to the bottom of the list.

If profitability is what drives farmers to comply what can be done to help them meet their compliance requirements? Three options that could help are;

- Develop accreditation programmes designed to give farmers preferential access to markets and/or incentives.
- Increase education around how compliance can improve profitability.
- Increase monitoring of compliance areas and become tougher with penalties, targeting profitability negatively.

4.1 Use of Farm system accreditation

Complete farm system accreditation programmes will be the most effective way of increasing compliance across the board. There are already a few of these out there that seem to be working well. Lead with Pride Synlait Milk's accreditation program and New Zealand Merino's farm accreditation programme are two examples.

Lead with Pride, has four pillars, Animal health and welfare, Environment, Milk quality and Social responsibility. The accreditation has 3 levels, Gold, Gold plus and Gold elite. Gold is the base standard that all Synlait suppliers are expected to meet, there is no premium at the base level. There is a tiered premium for the next two levels, 6 cents per kg/ms for Gold plus and 12 cents per kg/ms for gold elite when ISO65 Certification is achieved. Lincoln University's Agribusiness and Economic Research Unit (AERU) completed a study on the benefits of Lead with Pride, they found that an average Synlait supplier could earn an extra \$120,000/year purely from lifting performance across the four pillars to best practice or Gold Plus accreditation level. In animal welfare alone, there was potentially

more than \$76,000/year to be made from improving on farm practices to Gold Elite level as guided by the accreditation process. ¹⁰ So not only will it help to lift compliance performance but it should also help make the business more profitable and sustainable.

NZSTX programme is a PGP in partnership with NEW Zealand Merino. The aim of the NZSTX is to connect farmers to their customer through a smooth supply chain. The focus is on developing a value add product, Merino is a sort after product due to its natural properties. Part of the project was to develop a farm accreditation system. This accreditation system underpins the credibility of traceability and sustainably produced New Zealand fine-wool fibre¹¹. This close relationship between farmer and consumer through the accreditation programme is what allows the farmer access to this value add market.¹²

4.2 The link between compliance and profitability

Educating farmers around how they can increase profitability, while improving compliance will help to increase compliance performance. Rather than a dent to profitability, increased compliance is a positive and a way to strengthen New Zealand's competitive advantage. Compliance records are not costs it is proof of good practice¹³. Instead of looking at Health and safety as something that takes time and money to set up farmers need to think about risk reduction, the cost to a small business if a key member of the team is out of action due to injury is huge. There is also increased ACC levies, insurance and equipment repair if they don't get it right, these can have a big impact on a small farming business¹⁴. Good health and safety procedures can help to make businesses more profitable we just need to help New Zealand farmers understand how. To do this, all industry leaders need to be walking to the same beat and agricultural advisors and technical support personal need to understand the regulations and how putting things in place could improve business sustainability and profitability.

4.3 Closer monitoring of on-farm practices

The last option to increase compliance is to have closer monitoring of on farm practices and bigger fines to impact on business profitability. This option should be a last resort for a few reasons. Firstly, it would be hard to implement due to the distance of farms from regulators and the number of farms there are to assess. The different layers and areas of regulation would also make this difficult. Strict regulation doesn't always drive cultural change and engagement which is what leads to lasting compliance. We don't want compliance to be reliant on the regulator looking over the farmers shoulder. A real-life example of this is the difference between shed One and shed Two. Shed One has a farm team who sees a clean shed and hygienic milking practices as important, it is part of the farm culture and daily routine to keep a clean work place. Nothing changes the day of the shed inspection as it's just business as usual. Shed Two, never has time for a good daily shed clean, the place is normally dirty and unorganised, a few days before shed inspection a big spring clean begins trying to get it up to standard. I know which farm I would rather work in and drink my milk from. The only way we change shed Two is through education and cultural shift, as the day after the inspector leaves business as usual happens which for shed Two is not the desirable outcome. Penalties for getting it wrong have increased around health and safety, even with this increase in liability, results show that there is still a way to go until we have fully compliant farms. Zespri, Ag first, a grower and a pack house are all part of an ongoing prosecution, due to a quad bike death on a kiwi fruit orchard. Zespri have recently volunteered to pay a \$250,000 'enforceable undertaking' towards improving safety measures, which worksafe have accepted 15.

¹⁰ Lee A (2013) Synlait goes for gold. Farmers weekly.

¹¹ MPI https://www.mpi.govt.nz/funding-and-programmes/primary-growth-partnership/primary-growth-partnership-programmes/the-new-zealand-sheep-industry-transformation-project-nzstx/

¹² Sam Mann (2017) Profitability of the Kiwi Dream: What are the main drivers of profitability on North Island East Coast Sheep and Beef Farms?

¹³ Edmonds P (2016) Farm Compliance an 'enabler to profitability'

¹⁴ O'Dowd S (2016) Good Health and safety systems make farms profitable, says Worksafe's Al McCone. Stuff June 16, 2018

¹⁵ Hutching G (2017) Zespri to pay \$250,000 after orchard worker dies in quad bike accident. Stuff https://www.stuff.co.nz/business/farming/98373542/zespri-to-pay-250000-after-orchard-worker-dies-in-quad-bike-accident

The cost of putting a good health and safety system in place is much less than that, and it shouldn't take a serious accident on farm before good systems are put in place. Farmers need to be proactive not reactive.

5. Conclusions

Why is it important for farmers to comply with regulation? Consumers are becoming more concerned with where their food is coming from. They want to know that the food they eat is safe, and that it has been produced in an ethically and environmentally sustainable way. If farmers cannot prove that they have done these things, they might lose access to markets. With access to information a tap of the finger away, New Zealand agriculture needs to ensure it is doing its best to not only meet, but exceeded requirements. New Zealand agriculture can't afford to do nothing around compliance, the negative stories are too easy to find and sensationalise. We need to work alongside environmental groups, workers unions and animal welfare groups to ensure we are on the right track. Alec Jack (2009) wrote a quote in his Nuffield paper from a farmer representative in the USA "You can be on the right track, heading in the right direction, but if you're not moving fast enough you'll still be flattened by the train". As an industry this has been a topic of conversation for a while now, but progress is seen to be slow. We might be on the right track but it's time to put the pedal to the metal and crack into it.

We need to increase our rate of not only compliance but moving beyond compliance, we might be on the right track, but we need to get some speed behind what we are doing as an industry. Intrinsic values around compliance areas are not enough to make people comply, nor is external drivers alone. To get farmers to comply we need to show them how complying can increase profitability. Accreditation programmes and helping to educate farmers around how they can be profitable and sustainable (environmentally and socially) will be the key to driving compliance. We need to look at successful programmes like Lead with Pride and New Zealand Merino farm assurance programs and replicate them for other businesses. These programs not only help drive compliance but increase efficiency and profitability on farm. The 3rd party audit promotes trust in the processes. Consumers don't want to hear farmers say they are doing a great job they want to see the proof. This can be seen with the lack of trust there is between the urban population and Dairy NZ saying that dairy farmers have fenced 97% of their water ways. These stats then get debunked by other scientists saying it is all around the classification of property type and water body size with Mike Joy from Massey University saying that it's closer to 97% of 50% of water ways that have been fenced ¹⁷. This confuses the public and builds distrust which doesn't help the social licence to operate. There is currently little trust between the dairy industry and the urban population.

As an industry we need to take charge of the story that is told about farming in New Zealand, we need to do the right thing and this needs to be backed up with solid evidence. We need to call out poor performers and say, that's not ok and we won't accept that, step up or get out. If not, there is the real risk that the dairy industry is on the road to losing the social licence to operate in New Zealand. Vandalism of irrigators and tampering with milk vats in Canterbury is the overflow of the frustration that people are feeling over a perceived lack of action¹⁸.

6. Next steps

I see a few risk areas in the future, we need to get a head start on these and start thinking about how we might do things differently. A big area is animal health and welfare, some of the issues that will need to be addressed are, lameness, lack of decent shelter, Bobby calves and painful procedures e.g. docking, castrating and de-budding. Lameness can be managed in part by genetics, breading for soundness not just milk production or growth rates, especially in replacements for dry stock. Bobby calves has already come up and it won't go away until we find a better solution. Jack (2009) wrote about this in his Nuffield paper. His recommendation was sexed semen followed

¹⁶ Jack A (2009) Animal welfare and environment issues and the effect on the ag industry. Nuffield

¹⁷ News Talk ZB (2017) http://www.newstalkzb.co.nz/on-air/mike-hosking-breakfast/audio/mike-joy-to-claim-97-percent-of-our-waterways-are-fenced-off-from-dairy-cattle-is-wrong/

¹⁸ Small J (2017) Canterbury dairy farms valise over long weekend. Stuff https://www.stuff.co.nz/business/farming/98133635/canterbury-dairy-farms-vandalised-over-long-weekend

by beef bulls. This would require easy birthing calves, short gestation, good growth rates, accessible and affordable milk powder and a collaborative relationship between dairy and beef farmers. The industry also needs to look at how painful procedures are managed. You can see the damage the Mulesing campaign by PETA did to the Australian Merino market at the time. New Zealand managed to capitalise on that by not having the practice and having accredited farms to prove that¹⁹. We need to make sure that we are on the right side of innovating around painful procedures, we should be quickly trying to breed polled genetics into our dairy herds to eliminate the need for debudding. If we don't front foot these issues the industry risks more negative campaigns from animal activist groups. I'm not saying pander to their desires, but we need to understand what might hurt access to markets and negatively impact on the social licence to operate.

Environmental management is obviously another contentious area. The industry is making progress, but agricultural leaders need to push harder for compliance and promote accreditation programs that can prove when farmers are doing a good job. One of the challenges that farmers face is the time between action and result, it takes time to know if what has been implemented has had a positive effect. Farmers must keep pushing forward and engaging with environmentalists, scientists and work together as catchments to improve water quality and biodiversity.

If statistics don't improve around health and safety, regulation and monitoring will become stricter. Worksafe have been taking the stance of educating so far but if rapid change doesn't happen they will be forced to take a more regulatory approach. It isn't good enough that on average 20 people a year die on New Zealand farms. It is frustrating when there are great farming leaders out there trying to change the culture and attitude around farm safety. While on the other hand you have pages like NZ Farming, 20 showing a blatant disregard and cavalier attitude towards farm safety, especially around quad and motor bike safety. If attitudes and performance doesn't change, instead of guidelines and recommendations, there will be enforced rules. Farmers run the risk of potentially losing access to quad bikes on farms if they don't start to be managed better. As agricultural leaders we need to be setting the standard and the expectation. We need to dissociate ourselves with negative images and promote positive change.

There needs to be some more in-depth research to really understand what it is that drives farmers to comply. I believe when we are really clear on that we will be much better positioned to help them do so.

6.1 Recommendations

- Promote and develop more on farm accreditation programmes.
- Develop training showing how farm managers can use compliance to make their businesses more profitable.
- Further research on what barriers there are to compliance on farm and what drives managers to comply.

Listen for the whispers of frustration, respond to the early signs of dissatisfaction,

innovate, change, adjust and strive for greatness.

Ignore the whispers, the talk, the yells if you will, but don't then be surprised if your hand is forced.

¹⁹ Sneeddon J (2011) How the Wool industry undercut itself. http://theconversation.com/how-the-wool-industry-has-undercut-itself-on-mulesing-956

²⁰ NZ Farming facebook page https://www.facebook.com/NZFarming/?hc ref=ARTlzqHZ8kx4JwHqDXNfg2-Td9F8vntyOjgb6qfDtPr_CBpl6d_DDXAjeg8x_9ttStA&fref=nf

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