



**A Nuffield Farming Scholarships Trust
Report**

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**Adapting UK egg production
for an increasingly
welfare-conscious market**

Hannah Eastaugh

July 2020

NUFFIELD UK

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A Nuffield (UK) Farming Scholarships Trust Report



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

Date of report: July 2020

Title	Adapting UK egg production for an increasingly welfare-conscious market
Scholar	Hannah Eastaugh
Sponsor	The British Egg Marketing Board Research and Education Trust
Objectives of Study Tour	<ul style="list-style-type: none">• To identify potential challenges and opportunities that the UK egg industry could face in the near future.• How to promote the welfare credentials of egg production to ultimately inform the end consumer.
Countries Visited	USA, Canada, Norway, Germany, Austria, Denmark, Netherlands, UK
Messages	<ol style="list-style-type: none">1. It is time we, as an industry opened our doors, so that we are controlling the narrative rather than it being written for us. We have a good story to tell.2. We have some of the best farm standards globally, but we must not become complacent and must be audit-ready at all times.3. Barn eggs do have a place on the retail shelf but retail pricing needs readjusting for it to be a viable option.4. Producer margins need to improve if we are to have a sustainable egg industry in the future, requiring joint support from retailers, egg packers and producers.5. There are many challenges and opportunities coming down the track; but we are an industry that has shown in the past that we are able to innovate and adapt, and this must continue if we are wanting to grow within an increasingly welfare-conscious market

EXECUTIVE SUMMARY

The egg sector is currently in a transitional period. Cage-free pledges from retail and many food businesses are going to shape the egg industry over the next 5 years but there is still uncertainty on what the ultimate picture will look like. Average retail prices have decreased from £3.14/dozen in 2007 to £1.30/dozen in 2018 and producer margins are tight. Animal welfare is a constant factor. Legislation and increased pressure from animal welfare organisations have altered the way eggs are produced in other countries and are potentially going to affect the UK egg industry too. Additionally, consumers are becoming more interested in where their food comes from.

The objectives of the study tour were to identify potential challenges and opportunities that the UK egg industry could face in the near future, plus look at how better to promote the welfare credentials of egg production to inform the end consumer.

I visited the USA and Norway to compare large versus small scale egg production, focussing on alternative methods of production; Canada, with its unique egg supply management system; many countries in Europe due to their perceived advancements in animal welfare; along with businesses in all those countries which are key examples of successful engagement with consumers.

The UK has some of the highest farm standards that I have seen; however, we must not become complacent. Producer margins need to improve to ensure our industry can be sustained long term. The retail pricing structure also needs to change to give at least a 2-3p/egg price differential between free range and barn.

There are many opportunities and challenges coming, notably a potential beak trimming ban. It is crucial that regional groups are created and knowledge-sharing is embraced to ensure the health and welfare of birds are maintained. Culling of day-old male chicks is another emotive topic with Germany and France recently implementing a ban. In-Ovo sexing methods that breeding companies are adopting need to be commercially viable, with tests as early in incubation as possible to ensure acceptance by consumer and welfare groups.

Opportunities - such as utilising white birds, updating rearing systems to match laying ones, plus connecting more with academia - have benefits for both the producer and the wider industry.

Engaging with consumers - for example through social media, open farms and industry initiatives – allows producers to control the narrative. It is important not only to tell the story but to listen, engage, keep the messaging simple, and be real. Context is key. Finding 4-5 egg ambassadors for our industry who can promote what we do will help to get the industry's message heard.

In summary, there are many challenges and opportunities facing the UK egg industry; but it has demonstrated in the past an ability to innovate and adapt, and it is time we, as an industry, opened our doors. We have a good story to tell.

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Note that full reference details are given on the last page of this report. Only abbreviated references are given in the main body of the document.

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.

Please note that the content of this report is up to date and believed to be correct as at the date shown on the front cover

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1. Personal Introduction

While still at school I developed a strong interest in agriculture after carrying out several weeks of work experience on different farms - from dairy to layers to sheep. This passion grew during my time at the University of Nottingham where I studied Animal Science.

In 2012 I started on the graduate programme at Noble Foods, one of the UK's largest vertically-integrated egg packers, supplying own label and branded products to retailers and consumers. I worked on a one million-bird colony laying site in Nottinghamshire as a management trainee. Since then I have progressed through various areas of the agriculture team.



Figure 1: The author, Hannah Eastaugh

In August 2015 I was fortunate enough to be given the opportunity to work for the Happy Egg Co. in the USA for 10 months, working with first generation farmers in Missouri and Arkansas to help introduce free range standards of production in a country where free range didn't really exist at the time. This was a fantastic opportunity and subsequently it spurred my interest for further learning within the global egg industry.

I am currently the agriculture manager at Noble Foods and support the contract producer team looking after around 290 producers across the UK. Every day is different and presents its own challenges and opportunities. One day I can be out on a farm with the regional managers, the next you will find me in London liaising with retailers.

Throughout my time at Noble Foods I have been involved in hosting various visits around our farms: from buyers to technologists through to school children. This hosting has always been a highlight for me and when anyone steps out of our one million-bird colony unit and says *'that was a lot better than I thought it was going to be'* I know I have done my job. Explaining the system to them allows them to make their own informed opinion.

I had been in the egg industry for 6 years when I applied for a Nuffield Farming Scholarship. I thought the time was right as I wanted the opportunity to progress, expand my knowledge and give back to our industry.

Outside of work you will find me attempting to train my two spaniels with Nick, my husband of 3 years. We both work them during the shooting season and enjoy walking them in the Leicestershire countryside. I also like to keep fit and enjoy running.

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2. The Egg Industry – current state of play

The UK egg industry currently has 39 million birds which are split between the following production systems:

Table 1 : Different production methods of the UK egg industry. (adapted from: The Ranger, 2020)

Production method	%
Colony cage	32
Barn	3
Free Range	61
Organic	4

In 2003, free range was 30% of the total UK market and is now, in 2020, 61%. Globally the UK market contains one of the largest percentages of free range and is therefore seen as the leader in this sector; many countries look at us to see how we do it. Growth in the egg sector (*figure 2 below*) has been seen year on year and this is predominantly accounted for by an increase in free range egg production. The retail sector, in particular, has seen a growth in free range sales which now account for 67% (including 2% organic) of the total retail market share in 2019 (*Egg Info website, 2020*), whereas other production methods have remained relatively static. The retail egg category is now worth £1.066Bn, growing by 50% in the last 10 years (*Egg Info website, 2020*). In the last 3-4 months Covid-19 has had a dramatic impact on the food industry. Retail egg sales specifically have increased. However, food service sales have decreased significantly, making it very difficult currently to assess whether this will have a positive or negative influence on UK egg consumption.

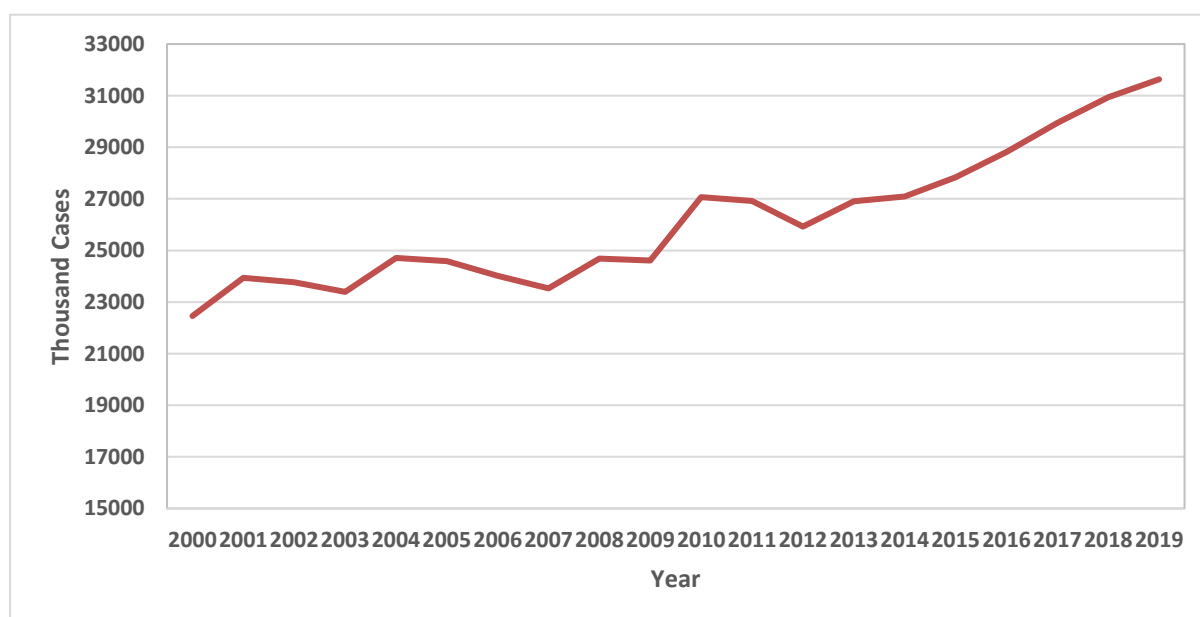


Figure 2: Total UK packing station egg throughput from 2000-2019. Source Defra, April 2020



2.1. A Deflationary market

Figure 3 below shows the retail price of eggs from 2007 to 2018. This has reduced by 60%: from £3.14/dozen in 2007 to £1.30/dozen in 2018. This is despite the fact that free range eggs, which have a higher cost of production, have increased their market share by approximately 60% in this period. According to The Ranger Magazine, in June 2020 average price to the free range producer showed its first increase since April 2017. Margins are incredibly tight and are currently estimated at about 12p/bird (without allowing for finance) for free range (*The Ranger, 2020*). One of the reasons for the decrease in retail price is due to discounting and competition for overall market share by retailers and packers alike. Unfortunately, eggs as a category have suffered the consequences of this “fight to the bottom”.

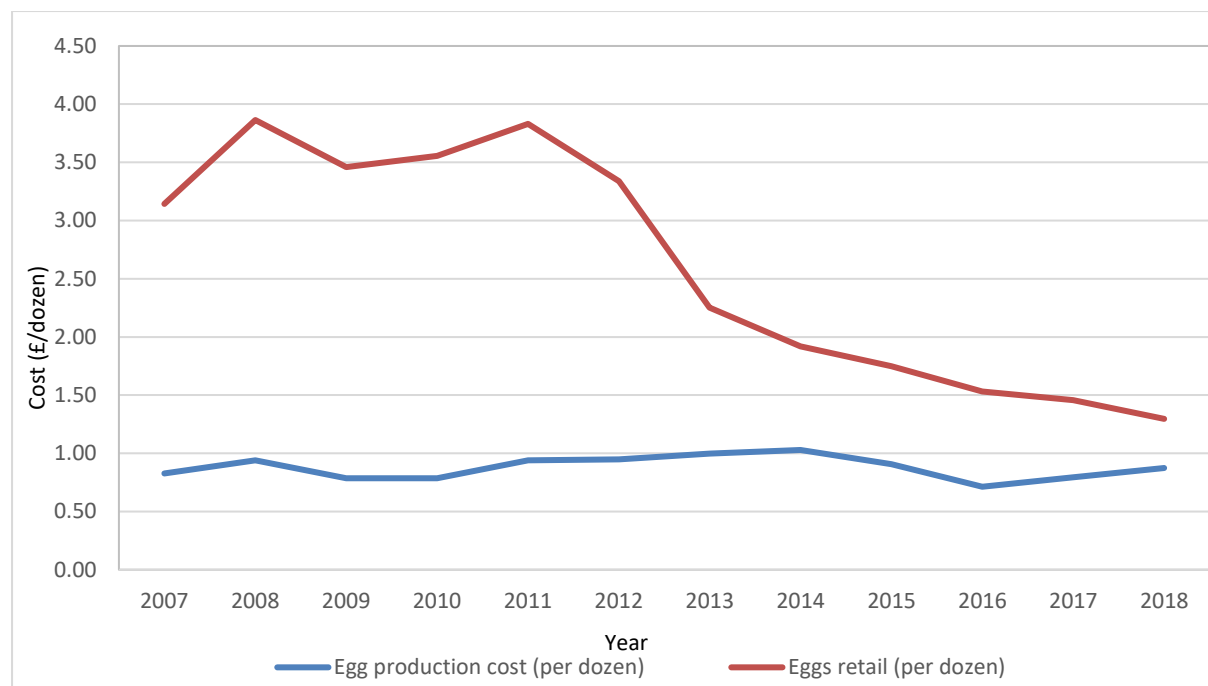


Figure 3: Egg production cost and egg at retail price from 2007 to 2018 for the UK. (Adapted from IEC, 2018)

2.2. Cage free pledges

In 2016 major UK retailer Tesco announced their intention to go cage free by 2025. The other retailers then followed. Pledges like these have been made globally, as well as by companies such as Unilever, Nestle and McDonalds. At the time of these announcements the ‘cage free’ definition was still to be determined.

With producers having already committed large investments into colony cages after legislation was introduced in 2012 to ban battery cages, there is a certain amount of trepidation in the industry about further sweeping changes to come. There is a reluctance to invest in a system that may or may not be continued given the current challenges the world is facing. Another point to note is that even though large retailers have committed to stopping the *sale* of colony eggs by 2025, it may be still legal to *produce* them unless legislation or Code of Practice decides otherwise, and there will still be a market for a ‘cheap’ egg.



This report is split into two parts. The first part (Chapters 4-5) will look at the different opportunities and challenges that I believe the UK industry is facing, and considering what is next for our industry, by giving examples of how other businesses in different countries have adapted and progressed through these. A number of welfare challenges are being thrown our way: such as the potential banning of beak trimming; culling of day-old male chicks; amongst others which will also be discussed.

The second part of this report (Chapters 7-8) looks at consumer trends. With more people interested in where their food comes from, a large proportion of this report is dedicated to looking at different ways farmers/businesses and industry bodies are engaging with the consumers. I feel this is more important now than ever before, given the huge influence that mainstream and social media are having on all industries.

2.3. Chapter summary

- Growth has been seen year on year in the UK egg market, with free range contributing 25% of the total growth in the last 4 years
- Retail prices have fallen steadily over the last 10 years, even though free range percentage is increasing, with producer margins remaining tight.
- Cage free pledges from retail and many food businesses are going to shape and change the egg industry over the next 5 years but there is still uncertainty on what the ultimate picture will look like.

Note: Terminology relating to the housing of laying hens in the UK is shown below

(adapted from https://www.researchgate.net/publication/47350266_Comparison_of_the_Welfare_of_Layer_Hens_in_4_housing_systems_in_the_UK. 2010)

System	Housing
Battery cages	Conventional battery cages, each cage (depending on size) housing approximately 4-6 hens in a barren environment. These were banned in the UK from 1st January, 2012.
Colony	The only form of “caged egg” in the UK and EU now is the colony system. Birds are housed indoors in large cages holding, dependent on their size, 40-80 birds in one colony. Such cages include a scratching area, perches and nest boxes.
Barn	Hens are housed in sheds and able to move freely throughout. Perches, nest boxes and material for dust bathing are provided but hens have no outdoor access
Free range	The hens are in sheds but have outdoor access during the day. They are housed at night.
Organic	Always kept on a free-range system but additionally must be fed only organic feed and housed on organic land.



3. Where I went and why

Because my study topic predominantly focussed on alternative methods of egg production, such as cage free and free range, this meant I principally focussed on markets that were transitioning or already transitioned to these production methods. I also wanted to look at large scale (USA) vs. small scale (Norway) in terms of production, to be able to make comparisons as the UK sits somewhere in the middle.

I wanted to take myself out of 'the egg bubble' where possible to look at how different people within agriculture connected with the consumer, which I was able to do in the US and the Netherlands.

I largely focussed on Europe due to countries, for example Netherlands/Germany, having made 'perceived' advancements in animal welfare, and several breeding companies and equipment manufacturers are also based in these countries. Canada was on my list as well, due to the fact they have a unique quota system to control egg supply, and I wanted to get a better understanding of how this worked and whether it allows for a more collaborative approach.

Unfortunately, my trip to New Zealand was cut short due to Covid-19 so I was unable to carry out a number of planned visits including the Nuffield Triennial conference. I also had plans to go back to Germany and Austria in May 2020 but, with the travel restrictions, my plans had to change. I have carried out several meetings with various people/companies within the UK as I felt it was important that leaders in free range in our own country should not be ignored.

Table 2: Countries visited on my study tour.

Where	When	Comments
Iowa, USA	March 2019	Contemporary Scholarship Conference
Monaco	April 2019	International Egg Commission Business Conference
Austria & Hungary	June 2019	UK Nuffield Poultry study group
Germany	July 2019	
Norway	July/August 2019	
USA	August/September 2019	
Canada	September 2019	
Denmark		International Egg Commission Global Leadership Conference
Rome, Italy	October 2019	FAO, Committee on World Food Security
Netherlands	January 2020	
New Zealand	March 2020	
UK	March 2019 – June 2020	Number of meetings carried out throughout my study period.



4. Challenges for the UK egg industry

This chapter will highlight key challenges that I feel the UK egg industry could face in the future, and shows examples of how different farmers/businesses and industries have adapted to or embraced these changes.

4.1. Beak trimming

In the UK all day-old chicks, apart from chicks destined to be reared to organic standards, are IRBT (Infra-Red beak treated). This is to reduce injuries that occur as a result of feather pecking in a flock. At some point in the future this will likely be banned in the UK, whether through legislation or Code of Practice. The preferred option would be implementing the change through a voluntary Code of Practice as this would allow the industry to determine the details and provide the flexibility of it, to be reviewed and amended if necessary.

Several countries in mainland Europe have already banned beak trimming with both Denmark and Germany implementing the ban through Code of Practice. Because the Netherlands exports a large proportion of their eggs to Germany, they have complied with this since 2018.

I visited several producers in the Netherlands and Germany to understand how they had coped with the changes and what strategies they had put in place. Andreas Mackes from Germany has 90,000 brown birds (45,000 per floor) in a barn system. He found that they ate more feed per day when they retained full beaks as opposed to beak-trimmed birds: 120-122g/bird/day vs. 118-120g/bird/day previously. His one comment was *'giving the birds more food is keeping them busy'*. He also used red lighting on the multi-tier systems as he said this helped reduced feather pecking. I observed this on several farms. You get a different opinion on coloured lighting depending on whom you speak to. I noted that light levels on the multi-tier systems were low, although German barn systems are required to have natural light. (5% of the total floor area).

Prior to the legislation changing, a large egg packer in the Netherlands created a focus group of 8 farms, focussing purely on the forthcoming beak trimming ban. Protocols were put in place concerning what to check for, and monthly meetings held with the farmers to ensure ideas were shared and constant support available. The producers involved in the trial received a premium for participating. They were then able to share management strategies with the rest of their producer base when the ban became compulsory.

4.1.1. Case Study: Roy Tomesen

I subsequently met one of the producers involved in the trials mentioned above. Initially Roy conducted a 6,000-brown-bird trial and it was disastrous. He lost 20% of the birds and had to deplete them at 70 weeks. He tried again, but with 40,000 birds, and with greater success. Enrichments such as pecking stones and lucerne were used from the start and oats were added to feed. He also commented about keeping the birds busy. One area of focus was lighting levels. From start of lay to



peak production the light levels are dimmed; however, between 30-35 weeks the intensity of light is slowly increased. This is the opposite to what I am used to in the UK.

Mortality in his brown birds now averages 3-4%, and can sometimes go up to 6%, which is the same as before he stopped beak trimming. Even so he believed that banning beak trimming was the right way to go.

Not all producers I met agreed with Roy that beak trimming should be banned. One of them found he had greater water spillage so had to invest in larger cups under the nipple lines; increased feed spillages requiring additional enrichments (see below), and an increase of 1-2% in mortality.

4.1.2. Enrichments

Enrichments are recommended in poultry houses to keep the birds occupied. During my visits I did not see anything drastically different compared to practice in the UK. Aerated concrete blocks were used by several producers in Germany; however this enrichment would need further research into the components of these blocks before being employed in the UK. Sigurd Hoyland in Norway used peckstones, grit and Big Dutchman's PickPuck (*figure 4 below*). The feed ration is given via this system along with feed supplied via the feed tracks on Mondays, Wednesdays and Fridays, and he has 27 PickPucks in the house for 17,900 birds. It has been suggested that the PickPuck not only keeps the birds busy, but the surface of the plate also wears down the beak. Having birds with full beaks means the enrichments are not necessarily going to last as long, so producers will need to consider the additional cost. One noticeable difference I observed in Europe was that enrichments were available to birds from as early as the rearing stage. The Steinsland family in Norway use pecking stones from 3 weeks of age in rearing, and another rearer in Germany used enrichments as soon as the birds were let out from the aviary (2.5 weeks), and replaced the enrichments at 10/11 weeks.



Figure 4: PickPuck enrichment available from Big Dutchman.
Source: Big Dutchman, 2020



4.2. Culling of day-old male chicks

One of the most controversial and emotive topics in the egg production industry is the culling of day-old male chicks. In the UK, the male chicks are disposed of by exposing them to argon gas, and are then used as a food source for the reptile industry. The reason behind this is because it is not commercially viable to rear the males for meat as they develop too slowly compared to chicks bred for broiler production. Pressure is mounting on the global egg industry to come up with an alternative solution as both Germany and France announced in October 2019 that, by the end of 2021, they would be banning the culling of day-old male chicks.

4.2.1. In-Ovo gender determination

In-Ovo sexing is the process in which the gender of the chick is determined prior to hatch and several different methods being explored are explained below.

4.2.1.1. DNA/hormone level approach

This approach consists of drawing a sample of fluid out of the egg with a micro needle and then analysing the hormone levels or DNA to determine the gender. This process is only possible after day 9 of incubation.

Advantages:

- Low percentage of sex errors and low reduction in hatchability

Disadvantages

- Cost of consumables to perform tests is high
- 20-90 minute delay for results – potentially not suitable for a large commercial hatchery
- Eggs must be handled twice
- Embryos are 9 days old

4.2.1.1.1. Respeggt Egg

A marketing label called 'Respeggt' has been created using this method. This has been patented and developed by Seleggt GmbH in Germany. These eggs are sold by several retailers in Germany, France and the Netherlands and the consumer is being charged an extra 2 cents/egg. This is the first of its kind.

4.2.1.2. Spectroscopy Approach

This approach looks at the Phosphorous content of the Z chromosome (Males have ZZ sex chromosomes and females have ZW sex chromosomes). Males have more phosphorus than a female. So a laser cuts a 12mm hole in the top of the egg and a beam of light is shone on the blood vessels of the developing circulatory system. From this a spectrometer can proceed to measure the energy that is reflected back by the light. Males will reflect less energy than the females because phosphorus will absorb more of the energy. The hole must then be covered with tape.

Advantages:

- Process occurs at day 4 of incubation
- Analysis of results is shown within seconds

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- No contact
- Very few consumable costs

Disadvantages:

- Hatchability reduction due to hole in top of the egg which must be sealed after the process
- Higher initial cost of the equipment required to carry out process

4.2.1.3. Colour sexing

This method consists of candling the eggs between days 11-13 to identify the wing tip colour. Females can be easily identified using this method. The females will then be hatched, and the male embryos are humanely destroyed.

Advantages

- Non invasive
- Reliable
- Low reduction in hatchability
- Automated process

Disadvantages

- Brown layers only
- Embryos are 11-13 days old

One of the areas that is still unclear is when the embryo becomes sensitive to pain. Some researchers claim they are sensitive to pain at 7 days old, others say day 15 (Seleggt, 2020). Therefore I feel that whichever method is adopted should take place as early on in incubation as possible.

4.2.1.4. Other options

Other methods being explored are growing male chicks for meat. In Austria it is a requirement that all brothers to the female organic laying hens must be reared for meat production. This meat is then processed into sausages. This option is almost certainly not commercially viable for the non-organic chicks.

Another solution is using a dual-purpose bird, different to our current commercial hybrids, which could use both the eggs and the meat from the birds. However, one challenge with these birds is they would not be as productive as the commercial hybrid, and eat more feed so, once again, the solution would seem not commercially viable.

4.3. Animal Welfare Organisations

There is continual pressure on our industry from animal welfare organisations. Some are more extreme than others and they vary greatly in their approach and goals. Some want to end 'factory farming', others want to end all forms of animal agriculture. Breaking and entering into farms, placing hidden cameras and protesting within housing units, are some of the extreme tactics that are not new but have increased in frequency over the last few years. Such tactics are not only detrimental to our industry, but extremely distressing for the farmers and animals involved.



4.3.1. Case Study: CIWF

I had an opportunity to meet with both the Food Business team and Campaigns team within Compassion in World Farming (CIWF); to understand what the organisation is about and where they see the egg industry going in the future. The Food Business team was created 10 years ago to develop positive engagement with the food industry. CIWF's goals are highlighted in Figure 5 below. More specifically their recent campaign concerning laying hens was to 'End the Cage Age'. This was to stop hens living in colony cages.

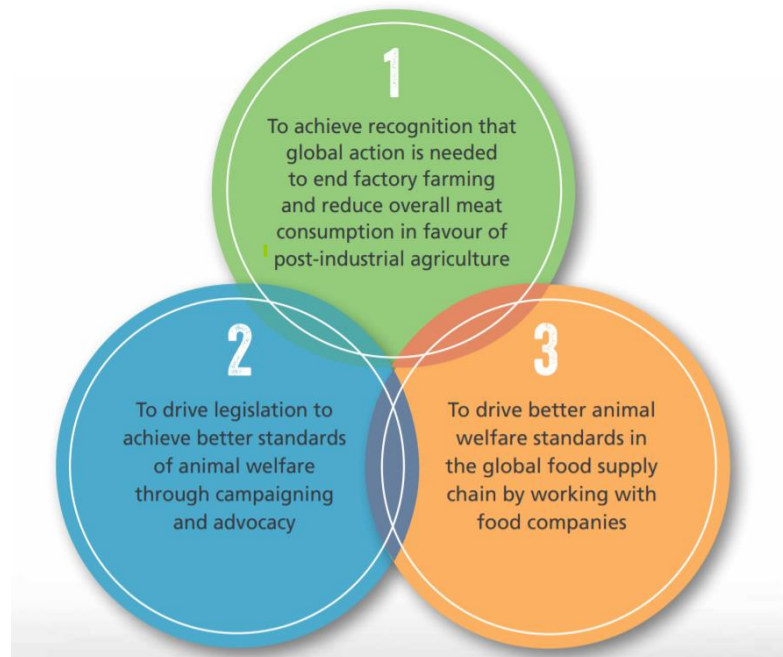


Figure 5: CIWF's three change goals from their 5 year strategic plan.
Source: CIWF, 2018

CIWF said some of the areas relative to laying hens that they would like to focus on were:

- Highlighting companies that are not complying with their cage-free commitments
- Beak trimming and the potential ban
- Natural light in poultry houses
- White birds
- Good quality ranges

The Campaigns team said specifically that they want more of a collaborative process, which would be positive, provide constructive criticism rather than previous 'bullish' approaches, and offer solutions in the above areas.

An example of a collaborative approach was in the UK where egg packers, the British Egg Industry Council, CIWF and Tesco came together and produced the new Lion Code of practice barn standards. This has given the industry guidance on the direction of travel but also meant that we have CIWF's approval and they would support the systems that we were putting in place. CIWF conducted both evidential and scientific-based research by visiting different cage free systems to enable them to

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understand the options that are available. The final question I asked them was: how long do you think barn systems will be around for? Their answer was 15-20 years. They see the UK ultimately becoming a purely free range and organic market.

4.4. Chapter 4 summary:

- The banning of beak trimming will be a huge challenge for all involved in our industry when it is implemented. A change in management techniques will have to be embraced and knowledge-sharing will be vital, learning from other markets which have already changed.
- In-Ovo sexing will be available in the near future but the method needs to be conducted early on in incubation, be reliable, and have no negative effects on hatchability and ultimately the productivity of the laying hens. The method must also be commercially viable, fully automated, have a high throughput and be accepted by the consumer.
- Where animal welfare organisations are prepared to engage, this should not be ignored by our industry as there is an opportunity to learn from each other and work collaboratively.



5. Opportunities for the UK egg industry

5.1. White vs brown bird debate

The white egg vs brown egg debate has been ongoing for several years. Depending which country you visit you will see either white eggs, brown eggs, or both on the retail shelves. The UK has seen white eggs trialled on several occasions with varying degrees of success. At the time of writing this report, Covid-19 has meant the retail demand for eggs has never been greater. To ensure there is as much availability on the retailer shelves as possible even Tesco are selling white eggs. The concern has always been that consumers do not understand the white egg and think it is produced from a ‘caged’ hen or is too clinical.

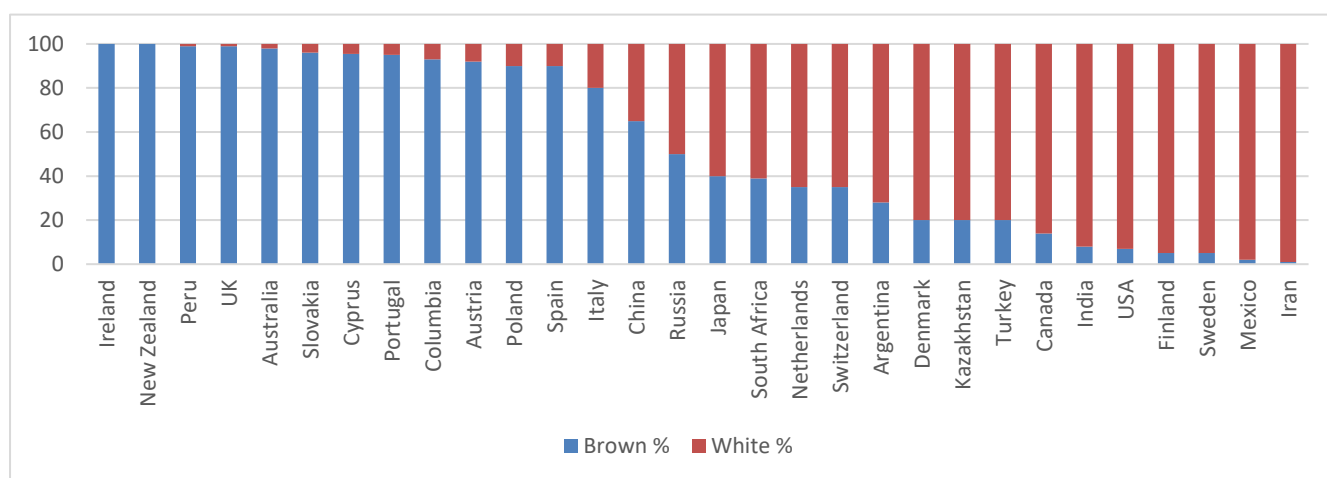


Figure 6: Brown bird to white bird ratio (%) per country for 2018. Source: IEC data, 2018.

Figure 6 shows the different proportion of white vs. brown birds in several countries. Norway, for example, is predominantly a white egg market. The USA is seeing a shift to brown egg in their cage free and free range/organic sectors, but 93% of the market remains white. The Netherlands has seen the white/brown egg demand change over the years. One egg packer had seen an increased demand for white egg recently, even in organic. This was due to a TV programme which talked about how the white egg was more sustainable. Lidl in the Netherlands only sells white egg and now other retailers are making the switch.

5.1.2. Production parameter comparisons

It is well known there are a number of suggested benefits of a white bird. Table 3 on the next page compares a white commercial hybrid vs. a brown commercial hybrid. In general the white bird is more persistent in lay so it is viable to keep her longer. A recent “white egg” free range flock in the UK was kept for 100 weeks and hit the 500 eggs per bird milestone. In comparison a brown flock is traditionally depopulated at 76 weeks.

Anecdotally, producers have said that, overall due to their behaviour, the white bird is easier to manage and they are able to cope better with fully intact beaks; they distribute evenly throughout the

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poultry house, produce less floor eggs, there are less incidences of smothering and they are generally more robust against disease challenges. They are also not as inquisitive, so if you are used to a brown commercial bird the management style is slightly different. When speaking with producers about managing the white bird and asking if they would go back to the brown bird, they are always quick to say no.

Table 3: Comparison between 2 commercial hybrid breeds: 1 with white eggs, 1 with brown eggs.
Source: Lohmann Tierzucht, 2019

Production parameters	Lohmann LSL Classic	Lohmann Classic
Colour of the egg	White	Brown
Eggs per Hen housed at 72 weeks	321	315
Egg Mass at 72 weeks (kg)	19.97	19.96
Average Egg weight (g)	62.2	63.5
Feed consumption (g/day)	110 - 120	115 - 125
Feed conversion (kg/kg egg mass)	2.00 - 2.20	2.15 - 2.25
Body weight (kg)	1.72 - 1.87	1.90 - 2.20
Liveability (%)	90 - 92	90 - 92

5.2. Welfare schemes

5.2.1. Beter Leven

In the Netherlands, the Better Leven (Better Life) label is comparable to the UK's RSPCA Assured scheme in terms of promoting higher welfare systems. Instead of having one logo, like RSPCA Assured, there are three levels which are represented as stars (*Figure 7*). The three levels are there to represent the process of 'raising the bar' and give farmers and consumers the possibility to improve animal welfare (*Beter Leven, 2020*).

Speaking to one company in the Netherlands, I was told the supermarkets have increased the pressure on requiring Beter Leven products. **Appendix A** explains in more detail the different requirements for each star in relation to laying hens. When speaking to farmers and egg packers in the Netherlands about the Beter Leven scheme, one topic that was constantly brought up was the scheme's continual evolvment and increasing expectations. It is believed that one area of focus which will be included in the future is green energy and sustainability, with animal welfare still being extremely important.



Figure 7: Beter Leven Logo seen on retailer packs. Source: Beter Leven, 2020



5.2.2. RSPCA Assured

I spoke to Joe Bailey NSch, Head of Farming at RSPCA Assured, about where she feels the scheme will go in the future. Joe highlighted that welfare outcome assessments need to be given more attention. The inspections need to be '*less focussed on paperwork*' and more '*looking at the birds and their behaviour*'. Another area of focus is continuous improvement by having routine reviews of welfare performance and real measurable welfare outcomes, with bespoke welfare improvement plans for members who want it.

5.2.3. Norway

Interestingly in Norway they looked at having their own welfare labels but decided not to go down this route. They believe all welfare should be good.

5.3. Rearing systems



Figure 8: Recently installed aviary rearing system in the UK.
Source: author's own.



One noticeable difference between the UK and mainland Europe is the rearing systems used. In Europe a higher proportion of birds are reared on an aviary-style system vs. floor-reared. Currently in the UK there are a limited number of aviary rearing systems, and a step-up system is traditionally used. One observation from Andreas Mackes, who is a rearer and egg producer in Germany, is that he has found his birds come into lay 1 week earlier than his floor-reared as they are heavier and stronger.

In my opinion this is one area the UK has not focussed on enough. Having a system where rearing and laying are matched is extremely important when it comes to producing a bird that is ready for a multi-tier system.

Having recently experienced an aviary rearing system (*figure 8 on previous page*) first hand with Noble Foods I can now see the benefit of having matched systems: from reduced stress levels of the birds at transfer, to having to put fewer birds back on the system at night; and overall behaviour of the birds, to name a few. This will be especially crucial if larger barn units are installed. Step-up systems will not be sufficient in my opinion. Further work is needed to establish the monetary benefit to a producer of using an aviary rearing system; the rearer will need an attractive payback in order to incentivise the development of these systems.

5.4. Connecting with academia

Extension services are commonplace in the US university system. They provide links between the universities and the industry and I think this is an area where the UK could improve. The research that is being conducted is relevant as farmers/producers/processors are able to express their challenges and concerns, which then allows the universities to help decide their area of focus – it is a two-way street. It also provides a support system to the farmer to continually improve their businesses.

An example of this is Darrin Karcher, who is an Assistant Professor of Animal Sciences at Purdue University. He has developed a poultry extension program with strong links to the large egg producers in the US and his research is based on addressing industry concerns. He has been involved in several educational programmes - such as the Shell Egg Academy, Poultry Health Management School and National Egg Quality School. These are aimed at different people along the supply chain and will address high priority areas: for example, how to deal with animal activism. By sending out questionnaires to the poultry industry annually he is able to understand what areas are of concern/need to be improved and then he is able to develop programs and research around them. In 2015, after the Avian Influenza outbreak, biosecurity was the hot topic, and he was able to incorporate this into his educational programs. He is currently building a program for the next 3-5 years so is constantly looking ahead.

The UK NFU poultry team in recent years has identified connecting academia and industry together as an opportunity. They are now hosting Poultry Research Seminars annually, which not only allows academia to share their research and findings but has also allowed the industry to build connections and relationships with them to hopefully assist in future research projects that will benefit our industry.



5.5. Cage free transitions

As mentioned in Chapter 4, many companies globally are currently making pledges to go cage free, and I wanted to see how different countries and businesses were dealing with these pledges. Cage free can be interpreted in different ways depending on what country you visit or who you speak to. There were a number of different options available to the UK; however, in 2019 as previously mentioned, the BEIC, CIWF, egg packers and Tesco collaborated to produce the Lion Code of Practice barn standards, which has at least given the industry guidance on what to build.

Several countries in Europe have already taken steps to ban colony cages. Germany has stated they will be banning colony cages by the end of 2025 and colony eggs are not sold in their supermarkets now. 60% of the eggs on sale in Germany and the Netherlands are now barn. They can therefore provide a number of lessons relating to standards and bird management in larger scale bird units, while there is more knowledge of multi-tier free range systems in the UK.



Figure 9: Multi-tier barn system in the UK. Source: author's own.



5.5.1. USA

One of the main reasons for visiting the US was to see large production units. The US have no set standards to define cage free so there are a number of different systems: from combi systems (closely related to colony cages; large scale, maximising bird numbers and utilisation of existing units) to traditional barn flat-deck houses.

Interestingly many of the retailers had caveats in their pledges (to go cage free) whereby if there was insufficient consumer demand or lack of supply they would not make the switch. During my visit in September 2019 one large egg producer told me that the retailers are sitting tight and they themselves only had a few cage free contracts. One example given was a large retailer who had decided to go 100% cage free: they lost 30-40% of their sales volume, and consumers switched to retailers offering conventional caged eggs. This highlights the price sensitivity of this transition in the US, and that it could be an all-or-nothing scenario.

In order to not oversupply the egg market, the producer was also trying to be strategic with their approach by removing cages and replacing them directly with cage free systems. They also wanted to ensure that the contracts were feed-linked rather than traded as a commodity, which is how conventional caged egg currently is. The cage free that they are currently producing is going into liquid egg with 4 million cage free birds on the ground, and another 1.8 million to add. Most of the houses were 400-450,000 birds with some complexes as large as 3-4 million birds. They had tried all the different equipment manufacturers to establish which system worked best for them and their goals. In terms of staffing levels, usually they have 2 people looking after 200,000 birds.

According to data from the Egg Industry Center, 2020, in January 2019 the total number of cage free layers in the US (including organic) was 57.2 million; and in April 2020 it stands at 76.6 million, an increase of 34%.

5.5.2. Pricing

A concern for many people in the UK egg industry is where the barn egg proposition will sit on the retailer shelf in terms of price. I visited a number of supermarkets in Europe to have a look at what eggs they had on offer, paying particular attention to the price differential between barn and free range eggs. On average in the EU it costs 2-3p/egg more to buy free range than barn. (In the US, cage free eggs are priced between 14-18p/egg, which surprised me because this is more expensive than a UK free range egg, which is currently only 13-15p/egg.) In order for the barn proposition to work in the UK, in my opinion the free range egg price needs to increase. The current differential between free range and colony egg is small (1-2p/egg). Barn eggs cannot be priced at the same price as colony as the cost of production is higher. For barn to be successful it needs to be made commercially viable for producers to invest.

5.6. Chapter 5 summary:

- The white bird has desirable traits that the UK market could benefit from; however, communications to the consumer will be vital to ensure it is a success on the retailer shelf.



- Welfare labels can be used to promote progressiveness in animal welfare; however, there is an expectation of continuous improvement and raising the bar, and producers and the industry need to be mindful of this.
- Further work is needed to establish the true benefit of aviary rearing so that both the industry and producers will be confident to invest.
- There is a real opportunity to build better relationships with academia. By improving the dialogue this should help focus the areas of research to assist with industry concerns.
- Countries I visited are going through the same struggles regarding the cage free transitions, with lack of commitment from the retailers.
- Pricing on the retail shelf will need a readjustment for barn eggs to be a viable option.



6. Consumer trends and perception

If you were to ask a consumer about poultry farming they would probably paint an idealistic picture of a farmer collecting eggs by hand with no more than 20 chickens in their back garden. This could not be further from the truth, and the gap between perception and reality is becoming ever wider.

To change a perception - which is defined as *'a belief or opinion, often held by many people and based on how things seem'* (Cambridge Dictionary, 2020) - is not an easy task but we must begin somewhere. Another challenge poultry farmers face is constant negative press and videos on the internet about what we do. If consumers read only negative information about poultry farming they are going to assume it is fact. So this chapter explores positive consumer engagement in more detail.

In recent years consumers have become more interested in where their food comes from. At the International Egg Commission conference in September 2019 Simon Wainwright talked about shoppers of the future. One of the trends identified was that shoppers will be more socially conscious. *'60% of under-25's say that the environment will be more important to them in the next 5-10 years. These are called influencer shoppers. They are: younger shoppers; younger families; online reviewers; high engagement social media users.'* (IGD, 2018.) These are the groups that will have the strongest voice and influence in the supply chain, and should not be ignored.

6.1. Consumer research projects

6.1.1. The WING Transparency Initiative

WING is a science and information centre for sustainable poultry production and is a joint project of the University of Vechta and the Lower Saxony Poultry Industry Association in Germany. They conducted a Transparency project and the main objectives of this were:

- Open poultry farms to the public
- Enable the public to get an objective and impartial impression of modern egg and poultry meat production
- Analyse the expectations of the visitors before entering the barns, and then the attitudes after such visits.

A survey was conducted before and after the visit and, interestingly, of the respondents (WING, 2016-2018) 45.8% said their initial feeling after visiting the poultry house was positive. However, specific areas of suggested improvements in terms of laying hen barn systems were:

- Lower stocking rates/more space (47%)
- More (natural) light (17.5%)
- Access to a free range area (13.6%)



Overall the results of the study showed that having a dialogue between the public and the farmer can create trust. The youngest generation (14-29 years old) were the most critical group and the gap between their expectation versus the reality of what they saw was the widest.

6.1.2. Egg consumer research

Consumer research carried out in 2018 by Noble Foods highlighted several misunderstandings of production systems. 30% of the respondents thought that birds from barn production systems were kept inside but had access to outside space. This highlights the need for simple explanations of the different production methods.

6.2. Relationship between consumers and food production

MatPrat, a consumer information organisation in Norway, state that their consumers are increasingly disconnected with food production, although they suggested it may not be to the same extent as in other countries due to a more rural infrastructure and slower urbanisation (there are few big cities). Even so, there are still misconceptions and confusions about food production. However, MatPrat feels that consumers generally have a better relationship with egg production compared to other types of food production such as meat.

6.3. Chapter 6 summary

- The gap between perception and reality needs to be addressed.
- The views of under 30's should not be ignored. They are the most active group on social media and are the most critical of perceived intensive farming methods.
- Misconceptions and negative press create a pessimistic view of poultry farming so there is a real opportunity for us to counteract this.



7. Industry and consumer engagement

There are several different ways in which farmers, businesses and brands are connecting and engaging with the consumer: whether this is through social media; podcasts; agri-tourism centres; or organised farm tours. As the IGD's (a research and training charity) Shoppers of the Future report highlights; *'ethics and social consciousness is not just about facts and figures, stories can be even more influential'* (IGD, 2018). Some examples of how farmers/businesses and industries are engaging with the consumers are discussed in the rest of this chapter.

7.1. Social Media

Social media is part of most people's lives. For people aged between 16 and 64 the average time spent per day on social media platforms has risen from 90 minutes in 2012 to 144 minutes today (Clement, 2020). Farmers can be proactive in sharing their story. Here is one example:

7.1.1. Sheepishly Me – Sandi Brock

Sandi Brock is a sheep farmer from Ontario, Canada, and works alongside her husband who is heavily involved in the arable side of their business.



Figure 10: Sheepishly Me logo.
Source: Sandi Brock.

Three years ago Sandi started her YouTube channel (Sheepishly Me) with the goal of sharing her story and being proactive about sharing what she and her husband do. At the time of writing, Sheepishly Me has 46.5k and 174k followers/subscribers on Instagram and YouTube, respectively. Her followers have grown significantly. She had just 5,000 followers on YouTube in March 2019, but hit the 100,000-follower milestone a year later, and this continues to grow. This growth is due the fact Sandi is continually working to produce content and videos and engaging with her followers. Her main aim is to do daily Vlogging during the lambing season to increase her audience, and then in between to maintain her audience.



Sandi has been specific in the social media platforms that she uses as it enables her to control what other people are sharing and *'context is key'*. Videos are her preferred method of telling her story and connecting with the public. This allows her to show the context of the whole process: images and text do not give the whole picture.

When talking to Sandi about how best to get started she said *'it is really important that you have a story and you are the right sort of person who is willing to put the time and effort into it'*. Sandi is seeing now that people are wanting to see the whole journey/how-you-do-it from scratch.

Some advice from Sandi for people wanting to get started on social media:

- Build a following on one platform - say Instagram (e.g. for a year) - before using another platform such as YouTube, and then use the two together to continually grow your followers.
- Pick a platform and post every day.
- Earn the audience's trust by starting with a story and building up that story. Over time show them you are an expert in this field.
- Be yourself, be honest and do not pretend
- Do show as many farming practices as possible - but only if there is context
- It is important to stay in the 'know how' and do your research on these channels and how they work, to make sure your site is a success. It will not happen overnight and a lot of hard work is needed.
- Engage with followers if they are respectful, but do not engage if awful. Also use the ability to hide external content from the channel and report abuse if necessary.

Sandi is now able to make a revenue from YouTube but this has taken a lot of time and effort in understanding how YouTube works. What one might consider the smallest detail, such as the wording on a thumbnail (to tell a potential viewer what the video will be about), can determine whether a video will succeed or not.

One area that Sandi describes as *'a blessing and a curse'* are the insights that are available about your account. On Sandi's channels there is a high proportion of millennials (18-35 year olds) but the total age range is 13-70 - and from many different countries from around the world. The male/female ratio is 50/50. These analytics are helpful to show who you are talking to.

Looking ahead, Sandi would like to continue to grow the channel and retain viewers. It is clear that Sandi has put in a lot of hard work, dedication, and determination into growing her channels on both platforms with great success.

7.1.2. Burnbrae Farms, Canada

Burnbrae Farms is a family-owned egg business which was founded over 80 years ago by the Hudson family, and is still run by the family today. It is the largest integrated egg company in Canada and supplies own-label and branded shell eggs, liquid and egg products, found in many retailers across Canada.



Social media became a priority for Burnbrae in 2011, when they felt they needed to 'up their game'. They wanted a place for people to go to get answers to their questions, be transparent about their business, and demonstrate that they are family-owned. Starting on Facebook they wanted to be able to share their 13 Corporate Social Responsibility (CSR) videos. In 2016 they started creating YouTube videos. This allowed them to explain their whole process to people so they could understand and accept it. Similarly to Sandi, they will engage with people who are polite but do not engage with people who are rude or write negative comments. The videos are generally short, 15-30 seconds long, to keep people engaged. Out of the 13 CSR videos that were created, one of the most popular was a video about hens. They have adapted over the years: 75% of their viewers are now on mobile devices, and Burnbrae now work with agencies and website designers to create the content.



Figure 11: Ted Hudson, the author, and Sue Hudson from Burnbrae Farms.
Source: author's own

7.2. Engaging with the media and ambassadors

Suzanne Ruesink, a dairy and pig farmer from the Netherlands, has found success connecting with the consumer, by working with chefs and TV programmes. One local chef with their own restaurant uses

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only local products sourced within 40km. Not only does this chef have a restaurant but also a classroom for teaching children about food waste and where food comes from. The restaurant experience is interactive and so the chef is able to talk about, and share, the farmer's story. Suzanne also connects with consumers through open days and believes that through products, entertainment, and social media you are able to connect with others.

An agricultural journalist I spoke in the UK said the poultry industry was '*closed off*' and '*it is hard to know who to speak to*'. A number of farmers in the UK do engage with the media, but very few of them are from the poultry industry; and those that are often harbour an element of fear that such contact potentially increases the risk of being targeted by activists.

"Just Farmers" is a programme created by Anna Jones NSch whereby 12 independent farmers, representing different farming sectors, get the opportunity to participate in workshops enabling them to have the confidence to talk to and understand how mainstream media (MSM) works. Two annual workshops take farmers out of their comfort zone, with sessions including Q&As with journalists, story pitching sessions, and understanding social media and content creation. Not only does this programme give farmers the confidence to engage with journalists and others in the MSM, but it gives the MSM wider contacts from across different sectors of agriculture.

Paul Kelly NSch, a premium turkey producer, is very open in talking about what his company does and how their product is unique. Paul said '*if we are not willing to showcase what we do, there is a fundamental issue and we need to question ourselves*'. At least once a year Paul hosts a media day whereby people from the MSM, such as bloggers and journalists, are invited to come and see the whole supply chain; from artificial insemination of the turkeys right through to processing. Paul has also connected with brand ambassadors such as Jamie Oliver and Mary Berry who receive a free turkey every year. They both then share and talk about the product. This will ultimately drive sales and brand awareness.

Completely outside the realm of agriculture is sports drinks company WOW Hydrate. Founded in 2016, it has relied heavily on ambassadors and influencers to build brand awareness. Speaking to Jon Hayman, Managing Director he said: '*Ambassadors and influencers are great for brand awareness and recognition. We try to match the ambassador to a campaign message to have a range. For example, in boxing we have the Heavyweight Champion of the World, Tyson Fury, through to Dennis McCann, whom we took as an amateur. Converting this brand recognition into sales is always the challenge, hence why we try to always work towards a message to encourage reasons to buy. This can be for health benefits or specific ingredients which will boost performance.*'

7.3. Agri-Tourism Centres

7.3.1. Fair Oaks Farm

Fair Oaks farm is a large Agri-tourism centre in Northwest Indiana, USA. They see around 500,000 visitors annually, and their mission is to create a place where the consumer can make a connection between a farmer and the food that they eat. I was fortunate to spend time with the co-founders, Sue and Mike McCloskey, who were able to talk me through how they got started, how it has developed, and the challenges they recently faced.



Fair Oaks Farm opened its doors in 2004 and has grown over the last 16 years to include a Dairy Adventure, Crop Adventure and Pig Adventure, along with a hotel and Cowfé (café). Not only are you able to see the cows being milked and drive through the dairy shed on a guided tour, you can even see a calf being born in the birthing barn (*figure 12*) if you're there at the right time. On the Pig Adventure you are able to see each stage of the process from piglets being born through to adulthood, with staff members around all the time to answer any questions. Each Adventure is an experience and is educational for both children and adults; highlighting topical areas, such as climate change and the environment. There is no visitor/animal physical interaction, which allows the high biosecurity standards to be maintained.

The Fair Oaks dairies in total produce 250,000 US gallons of milk p.a., which are sold to one of the large US retail chains and goes into their branded milk products, Fairlife. The pig farm produces 80,000 pigs/year and is owned by several families.



Figure 12: Birthing barn at Fair Oaks Farm, one of the many different experiences at this Agri-tourism centre. Source: Author's own

The robotic dairy was under construction during my visit but Sue said *'you have to educate through entertainment, keep things simple and not too technical. If we are wanting consumers to trust and eat what we are producing, we need to be open and show them what we do'*.

They collaborate with various businesses and experts within the sector to bring the experience to life and create an environment that is fun, educational and interactive, showcasing modern farming practices. They are always looking at what else they can showcase - so maybe one day an Egg Production Adventure will be on show!



In June, 2019 the site was unfortunately involved in an incident whereby undercover footage was obtained showing alleged animal abuse. Both Sue and Mike were open in talking about this situation and have continued to share with the public what they are doing to ensure no reoccurrence. Below are just some of the changes that happened as a result of this unfortunate situation:

- Those involved were immediately dismissed
- All staff received intense animal welfare training
- A 3rd veterinarian has been hired whose sole responsibility is animal welfare
- CCTV cameras have been placed in all areas where cows and people interact and this footage is monitored daily.

This incident highlights the risks involved with social media, especially in highly sensitive areas like animal agriculture. The actions of one person could potentially damage your business reputation and the industry as a whole. It was an extremely challenging time for all involved but, by putting various measures and changes in place, Fair Oaks is determined to do better. What they have achieved is commendable, and especially how they have reacted to the above situation; taking ownership of what happened and being transparent along the whole journey.

7.4. Open Farms

Visitor rooms and viewing windows tend to be more common in the broiler industry as opposed to the laying sector, and this has allowed the former to be more involved with programmes like Open Farm Sunday without the risk of compromising biosecurity. Open farms are certainly not a new concept in agriculture but tend to be less common in the poultry sector because of concerns about bio-security.

7.4.1. UK

Figures 13 and 14 over the page show a recently built organic farm in the Borders, Scotland, run by Angela and James MacLean. When building their new organic shed they decided to include a viewing gallery above the packing area so visitors could not only see the birds but also follow the journey of the egg right from the bird through to the pallet. A contemplation zone was also built where birds can be observed up close without disturbing them. The MacLeans wanted an opportunity to open their doors in a safe and controlled way, and help to answer some of the misconceptions about organic farming. The plan has always been to grow the size of the production unit, but getting planning permission has been a challenge. Building this viewing area - which is open to anybody from school children, through community groups, to the locals - they are able to showcase what they do and answer any questions. In April this year they also added Fraser's Farm shop where local products can be purchased, alongside the MacLean eggs through a vending machine. This has proven to be very popular and hopefully will spark a general interest among people to help them understand where their food comes from.



Figure 13: Contemplation room at the MacLean farm



Figure 14: Viewing gallery at the MacLean farm.
Both pictures supplied by Angela MacLean

7.4.2. Netherlands

A producer in the Netherlands has 140,000 layers across two sites with 30,000 eggs/week sold via vending machines. Observing the number of visitors to the vending machine alone - while I was waiting to meet the producer - was staggering. Eggs and several other products were available to purchase.

On one of his sites the producer has a visitor room where he charges for tours (but you do get a free box of eggs as part of the tour!) He believes the owner should be present when there are visitors, to answer any questions they may have. By giving a positive experience, customers are more than likely to continue buying eggs, and think about the food they are purchasing and eating.

7.4.2.1. The Kipster system

The Kipster concept claims to be the most animal- and environmentally-friendly poultry farm in the world. It focusses predominantly on 7 key areas (*Kipster, 2020*):

1. High standards of animal welfare
2. Closed loop farming
3. No wasting of roosters and spent hens
4. Great business opportunity for farmers
5. No emission of fine particles
6. Carbon-neutral eggs
7. Transparent and open farm

Using a modular concept the farms can be as small as 3,000 birds, but as large as 120,000. The newest site in Beuningen in the Netherlands opened in January 2020 and has 42,000 white birds across 2 flocks. The first site opened in 2017. Both facilities supply directly into Lidl.

The eggs are classed as “barn” but have 3-star rating under the Beter Leven scheme (*see Appendix A*). Upon entering the visitor centre there are a number of infographics detailing the key areas mentioned above (*figure 14*). The farm is open to the public all year round from 10 a.m. until sunset, and entry is free. The viewing area allows one to see into the birds’ veranda/winter garden area (*figure 15*) and also to watch the eggs being graded and packed. The design of the building is unique (*figure 13*) and,

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even though the eggs are classed as barn, the birds have access to natural light and to a small area with access to the outside. The birds and the packing centre are kept completely separate from the general public by Perspex glass so, in terms of biosecurity, the risks are significantly lowered and the birds are not disturbed.



Figure 15: The Kipster building. Source author's photo



Figure 16: Visitor Centre.
Source author's photo



Figure 17: View from Viewing Gallery.
Source author's photo



7.5. Examples of industry engagement

7.5.1. Egg Farmers of Canada

Egg Farmers of Canada (EFC) represent 1100 farmers and manage egg supply in Canada, plus also heavily promoting egg consumption. 2019 was their 11th year of consecutive growth and they are unique in terms of the supply chain management system in place. Canadian producers control the cost of production so therefore are price makers. This ultimately means that the value is spread along the supply chain and organisations such as Egg Farmers of Canada can use this to heavily promote their industry. They take great pride in promoting their industry, the farmers, their sustainability story, and the people within the supply chain.

In the communication team there are 5 full-time staff who conduct a wide variety of activities such as research and insights; digital communications; social media; and working with journalists. The audience they are engaging with is also diverse: from the Canadian public; political influencers; to the supply chain and farmers. Their vision is to *'be a branded and reputable news source'*.

7.5.1.1. Insights research

Through their research, Egg Farmers Canada have found that Canadians are changing the way they buy products and introduce new purchasing decisions. They found that the two main broad areas of interest were:

- Quality and safety
- Farming practices (animal welfare, natural, sustainability) and a Canadian source

This research is carried out yearly and is then used when planning their communication strategy.

7.5.1.2 Media and online presence

EFC have found that mainstream media has a big influence. EFC therefore want to understand what the media is saying, doing, and where are the best areas to be both proactive and reactive in.

Every week EFC creates an article and produces a promotional plan for this through various media channels. They have several content pillars such as community and animal care which allows them to focus on one area per week. For them to achieve this they have to consider their audience, which influences how the article is written and promoted. By constantly creating new content they are also creating demand and building up their audience. In 2018 they published 50 articles, expanded their social media followers, and had 27 paid ads on Facebook and LinkedIn, which generated nearly 10 million impressions (number of times content is displayed).

They work with a team of writers and designers to produce the above-mentioned article, investing a lot in photography, ensuring the right assets and resources are being used. Each article costs them about \$5,000 - \$7,000 to produce every month. To illustrate this approach, one week they could be focussing on the 'our people' pillar and an article could be written specifically about a farming family and all that they are about, the next week could be focussing on sustainability. All these stories are



published on the EFC website whilst also connecting to the various social media platforms, depending on what the core audience is.

By being visual and transparent EFC is able to showcase what a typical Canadian egg farm looks like; allow the consumer to connect with farmers; learn where their food comes from; and also promote other areas such as sustainability, the environment and animal welfare.

7.5.2 MatPrat – Norway

MatPrat (translated means food talk) is the Norwegian Centre for consumer information specifically for eggs and meat. It works on behalf of the farmer but targets the consumer. Their core activity is content creation, and they want to be known as the pivotal supplier of food information and knowledge. This will ultimately contribute to the farmer's process of value creation and increase the consumption of Norwegian egg and meat products. Additionally, they want to serve as a driving force in developing a more consumer-orientated marketplace and industry. All content is generic to avoid bias towards a particular production method or brand, and there is no other generic marketing organisation in Scandinavia.

The organisation has specific websites aimed at different demographics: one for everyone; one for children; and one for the Norwegian school system. Their main website is Norway's most popular for inspiration and knowledge about food and cooking. There were 38 million visits in 2018, increasing to 45 million in 2019 (Norway's population is approximately 5.3 million). The organisation also has their own social media channels and use paid media. They have found that their role is changing. Previously they used to be predominantly about food recipes and inspiration around cooking; now they find themselves talking about animal welfare and climate change.

7.6. Chapter 7 summary:

- Social media features more and more in our everyday lives. It is an important tool for engaging with our consumers and should not be overlooked or ignored.
- Viewing rooms/agri-tourism centres are a good way for consumers to see what egg producers do without compromising biosecurity.
- Farmers, egg packers and industry bodies all have a role in communicating to the consumers.
- Brand ambassadors are a way to share your messaging with the masses.
- Farmers need to be given the tools to confidently share their messages.
- There are many examples in Chapter 7 which demonstrate the success of these points.



8. Conclusions

1. The UK has some of the best farm standards that I have seen; however, we must not become complacent and must ensure that all producers are hitting the same standards.
2. Producer margins need to improve, and this ultimately sits with the retailers having continually driven down prices to gain market share. Without improved margins, future investments, whether that be in barn or free range, will be non-existent, and UK total flock size could diminish.
3. Barn eggs have a place on the retail shelf. This gives the consumer a choice. However, retail pricing needs readjusting for barn to be a viable option.
4. The changes in our farming systems will largely be driven by welfare and consumer behaviours, and these must be embraced. Changes such as the banning of beak trimming and In-Ovo sexing will cost both time and money once implemented.
5. The poultry industry is relatively closed off to mainstream media.
6. We need to start engaging with our consumers more, whether that be by farmers/businesses/or industry bodies, and can be through a variety of different platforms. Social media engagement should be one of the main areas of focus. It is important not only to tell your story but to listen, engage, keep the messaging simple and be real. Remember context is key.

9. Recommendations

1. **BEIC and RSPCA Assured:** Increase further the number of unannounced audits, with greater focus on bird welfare and less desk-based questions; but reduce the overall number of audits by aligning standards and improving consistency of the auditing approach.
2. **Retailers and egg packers:** explore different pricing models to ensure margins for producers are improved and maintained long term.
3. **Producers:** before a beak trimming ban is implemented, pre-competitive producer groups should be created regionally so that learnings can be shared to ensure the health and welfare of the birds are maintained. Utilise successful farmers from Europe to also engage with our industry and producers.
4. **BEIC:** Identify 4 - 5 suitable egg producers within the industry to become egg ambassadors, whose role is to promote their story and who are given the appropriate training and support in doing so.
5. **All of the above:** Improve relationships with the media and journalists within the agricultural sphere to ensure that our voice is heard whether it is a good or bad news story.



10. After My Study Tour

The Nuffield Farming Scholarship has helped both my personal and business development. It has given me a lot more self-confidence and taught me to believe in myself. If I can complete a 134m bungee jump above a 400m valley in New Zealand I can set my mind to anything. I would like to think it has also gained me recognition outside of Noble Foods and within the wider UK egg industry.

My approach to my day job has also changed. I am more confident in voicing my opinion where appropriate and I have also been able to bring back some ideas and learnings. Some of these are only small, but hopefully will make us more efficient in what we do.

There are areas within my travels that have sparked my interest that were not covered in my report: such as getting young people interested in the industry and building relationships with universities, which I am hoping to develop in the near future.

Once the Covid-19 restrictions are lifted I would like to get out on farms talking to producers about my findings. I shall hope to identify 4-5 producers who would be willing to tell their story; then provide them with the help and support and training they need to give them confidence on social media, for example. I shall hope to talk to the media myself and share the findings of my report.

Hannah Eastaugh

June 2020

Editor's Note: A UK Nuffield Farming Scholarship consists of:

(1) A briefing in London.

(2) Joining the week-long Contemporary Scholars' Conference attended by all new Nuffield Farming Scholars worldwide, location varying each year.

(3) A personal study tour of approximately 8 weeks looking in detail at the Scholar's chosen topic.

(4) A Global Focus Tour (optional) where a group of 10 Scholars from a mix of the countries where the scheme operates travel together for 7 weeks acquiring a global perspective of agriculture.

The Nuffield Farming Scholarships scheme originated in the UK in 1947 but has since expanded to operate in Australia, New Zealand, Canada, Zimbabwe, France, Ireland, and Netherlands. Brazil, Chile, South Africa and the USA are in the initial stages of joining the organisation.



11. Acknowledgements and Thanks

The journey over the last 2 years has been a once-in-a-lifetime opportunity and the success has been down to the number of amazing people I have met and who have given me their time, opened up their businesses, farms and homes, and to whom I am truly grateful and thankful.

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13. Appendix A: Beter Leven

Table 4: Beter Leven criteria for each star level.

Beter Leven	Criteria
1 star	<ul style="list-style-type: none"> • Barn – 9 birds/m² stocking density • Access to winter garden for at least 8 hours/day • Daylight and fresh air must be available in the winter garden so that climate reflects • Winter garden must be at least 20% of the floor area of the barn • Enrichments such as pecking stones, Lucerne must be provided.
2 stars	<ul style="list-style-type: none"> • Free range – 9 birds/m² stocking density • Access to Winter Garden • Winter garden must be at least 50% of the floor area of the barn • Enrichments must be provided. • Access to range area (2,500 birds/hectare)
3 stars	<p><i>Option 1</i></p> <ul style="list-style-type: none"> • Organic farm – 6 birds/m² stocking density <p><i>Option 2</i></p> <ul style="list-style-type: none"> • Barn with 6-7 birds/m² stocking density • Access to winter garden (must be at least 100% of the floor area of the barn) • The roof of the winter garden needs to be made of a permeable material • In the winter garden there needs to be objects such as shelters available to the birds • 360 cm²/bird needs to mimic shelter/overhead coverage in the form of fake trees for example • Enrichments also need to be provided. <p><i>Option 3</i></p> <ul style="list-style-type: none"> • Free range – 6-7 hens/m² stocking density • Access to range (2,500 birds/hectare) • Same as option 2 excluding overhead coverage requirement in winter garden

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