McDonald's Europe Flagship Farms

Free–Range Eggs – The Lakes, UK

Introduction

This case study demonstrates how free–range egg production can be undertaken with maximum benefit to the well–being of the flock and providing a diverse and sustainable business in a rural environment. It also demonstrates good practice in terms of supplier relations and working closely within a local community.

The key initiatives undertaken by The Lakes can be summarised as follows:

- All the eggs are produced under the British Egg Industry Council standards and all producers farms are approved under RSPCA's Freedom Foods Scheme and the British Egg Industry Council standards.
- All use of medicines throughout the company is therapeutic. No prophylactic use of medicines is undertaken and even wormers are only used after worm sampling has identified the need to do so.
- The Lakes tree planting initiative promotes the laying birds to range, encouraging more natural behaviour and fewer welfare issues.
- Bird housing used and recommended by The Lakes for the laying birds are simple to construct and are designed to use the minimum amount of electricity once operational. The buildings are designed to be multi–purpose, so any future changes to the original use of the building can easily be made.
- All supplier farms have a specific biodiversity management plan created by independent advisers, the Farming and Wildlife Advisory Group. All farms must be registered under the DEFRA –funded Entry Level Scheme (ELS), encouraging farmers to deliver simple yet effective environmental management.
- The Lakes has provided local farms with a profitable diversification venture – after the foot and mouth outbreak in 2001 the area was badly affected and traditional agricultural enterprises were economically unviable. At present there are 50 local family farms (contract egg producers) which supply free–range eggs to The Lakes.
- All staff are paid a minimum of 10% above the minimum wage. Staff receive training and are encouraged to undertake more duties and responsibilities which is then reflected in their pay.
- £4 million has been put into the local economy during the last year, through wages, local contracts and spending.

David and Helen Brass

> "David and Helen have developed a business which is focussed on animal welfare and great product quality. Their dedication and commitment to the local community and environment is admirable. They are passionate about the welfare of their birds and are committed to providing conditions which improve the wellbeing of the birds. David is quick to share his ideas and enthusiasm with his contract egg producers and has developed a business which is easy for farmers to set up and is ultimately profitable. The agricultural sector was badly affected after the 2001 foot and mouth outbreak and the economic importance of David's business in the area cannot be underestimated."

Karl Williams
Flagship Farms Programme Manager, FAI

Summary of actions

The table below summarises the key areas of good practice displayed by The Lakes Farm and the benefits (EN **environmental** / EC **economic** / ET **ethical**) that arise from taking these actions.

	Action	Benefits
Certification/ assurance	**All eggs comply with British Egg Industry Council Standard**	ET BEIC standards ensure that the eggs are produced to the highest food safety standards
	All eggs comply with RSPCA's Freedom Foods Standards	EN Freedom Foods requires producers to comply with environmental legislation within standards ET Freedom Food Standards cover the welfare of birds
	Suppliers' farms registered under DEFRA environmental stewardship	EN Imposes minimum environmental standards across a range of options ET The Lakes leads by example
Energy efficiency	**Incinerated waste wood & cardboard generates energy for hot water**	EN Lower energy requirements from fossil fuels and reduces the amount of waste going to landfill EC Reduces fuel bill
	Environmental building design	EN Utilises natural ventilation and uses low energy light bulbs which reduce electricity demands and has lower attributed GHG emissions EN Control of red mite is taken into account during construction, which reduces the need for chemical controls EC Buildings are cheaper to run, dual purpose construction which allows for alternative uses in the future other than laying birds
Staff	**All staff paid above minimum wage and training provided**	EN Staff and suppliers are trained on key environmental issues ET 60 full time staff at the factory with 5 staff on the farm benefitting from this policy
Supplier relations	**Producer group meetings conducted**	EN Producers are trained on current environmental issues and management EC Egg producers receive training on current regulations and working practices. Benchmark data is provided to identify areas where productivity can be improved
Animal welfare	**Pullets grown to larger size prior to dispatch to layer units**	EC Lower mortality rates improve flock profitability ET Healthy, well prepared birds with reduced health issues
	Comprehensive vaccination programme for pullets	ET Develops the bird's natural defences against disease and leads to reduced use of medicines
	20% of the range areas for birds are being planted to native trees	EN Planting trees has a positive effect on local biodiversity and reduces GHG's by storing carbon EC Bonus payment on eggs produced under this system gives a 12 month payback period on the cost of tree planting ET Encourages birds to range further which improves welfare
Sufficient high quality production	**Consistently higher average egg yields**	EC Improved profitability due to increased egg sales
Community	**Company has provided local employment**	ET A total of 60 staff are employed ET Over the last year £4 million has gone into the local economy
	Company has provided diversification opportunity for local farms	ET Providing a profitable enterprise for the local farming community after the Foot and Mouth outbreak ET Currently 50 local family farms have contracts to supply eggs

Background

Since the 1950s the British egg industry has seen dramatic changes in flock size, breeding and production techniques. Indoor systems were developed to provide optimum control over birds and to maximise egg production. The majority of eggs produced in the 1970s and 1980s came from commercial cage systems. Over the last few years, as consumers have become more aware of food production issues, free–range egg production has increased to make up about 50% of the market. Currently there are approximately 33 million laying hens in the UK and 350 million in the European Union.

There are currently four different farming systems in egg production (figures from UK):

1. Caged hens (enriched)

This is the most intensive egg laying system in Europe. European regulations came into force in January 2012, banning the use of conventional cage systems. Cages must be replaced by enriched cages, with perches, scratching pads and areas for egg laying. The improvements of enriched cages over the conventional system are minimal and do not address the current welfare issues of the caged system.

2. Barn eggs

Birds are kept in large sheds (percheries) with rows of perches at different heights. Floors are partly covered with litter (wood shavings or straw) and communal nest boxes are provided. Birds can move around freely and can express some of their natural behaviour. There are no predator problems as birds are housed continuously. Lighting levels, feed and water can be automatically controlled. Systems can be single–tiered or, more commonly, multitiered, where feed, water and nest boxes are provided at different levels. There is usually a scratching area but in multi–tiered systems birds may not have easy access to it due to the relatively high stocking densities and other birds effectively blocking the way. Currently 5% of UK eggs come from birds kept in barns.

3. Free–range eggs

Free–range is very similar to the barn system, with one important exception; there are openings in the side of the buildings (pop holes) which allow the birds access to outside space. Under current EU regulations the birds must have access to open–air runs (during daylight hours) which are mostly covered in vegetation. There can be no more than 2,500 birds per hectare and birds are able to scratch, dust–bathe and exhibit natural behavioural characteristics. Predation by foxes and buzzards can be a problem. Currently, 50% of UK eggs come from free–range birds.

4. Organic eggs

Organic eggs are produced under the same conditions as free–range although stocking densities are lower. The living area must be free of chemical fertilisers and pesticides, and the feed must be from organically grown crops. Currently, 2% of UK eggs come from organic birds. (NB – these fall under the category of free–range eggs.)

Introduction

David Brass grew up on Meg Bank Farm, a family–run, 120–acre livestock unit on the edge of the Lake District in England. After completing a degree in agriculture, and a 10–year stint as a pilot in the Royal Air Force, David returned home to work at the family farm. At the time, Meg Bank farm was mainly rearing beef and sheep, with David's wife Helen looking after a small flock of 200 free–range birds. Over the next five years, the flock expanded to 5,000 free–range birds. With the closure of the local packing station that the farm supplied, the decision was made to invest in a packing station at Meg Bank farm. A contract with a large supermarket allowed the farm to invest in a management team, and with further expansion a contract to supply free–range eggs to McDonald's was signed. The Lakes Free Range Egg Company was born.

Facts: for all types of egg production systems

- Light levels are controlled, as egg laying ceases naturally during winter (due to shorter day lengths). Electric lighting is used to extend the day length to summertime levels and perpetuate the laying period so that birds do not moult.
- Birds are kept continuously 'in lay' for about one year, after which they are slaughtered.
- Laying birds naturally develop a pecking order, and if the birds do not have space and an enriched environment, this can lead to bullying, which may cause injury and even death.
- The modern laying hen can lay more than 300 eggs per year, beginning to lay from about 16 weeks of age.

The Lakes Free Range Egg Company ('The Lakes') now has around 70,000 free range birds, held over two sites. The birds supply around 21 million eggs annually into the packing station (about 10% of the total requirements of the business). David took the decision to contract out a large proportion of the egg production to local farmers, helping local businesses (which were badly affected during the Foot and Mouth outbreak in 2001) to find an additional business venture to the areas traditional beef and sheep production. David provides advice to local partners on topics from building construction and breeds of birds, to types of disinfectant to use. This bespoke approach helps new suppliers operate effectively from day one. The Lakes provides a minimum three flock contract, in return, he insists that his suppliers work to the same high standards of good practice that he has adopted over the years.

> "It is good to see our customers taking an active interest in the production systems their suppliers use to produce their raw materials and then promote best practice within their supply base. For our farming operation to be selected as an example of best practice for the McDonald's Flagship Farms programme is not only an honour personally but recognises the strenuous efforts our whole team has made over a 10–year period."
>
> David Brass

Today there are 50 free–range egg producers supplying the packing station, 40 of which are within a 30–mile radius of The Lakes. David and Helen's commitment and vision to welfare–friendly practices has tapped into a market where a more informed consumer has the welfare of the birds in mind whilst buying eggs. Their business is totally focused on the production and packing of free–range eggs, and it is this commitment that provides the consumer confidence in their product.

Certification/assurance

BEIC and RSPCA Freedom Food standards

It is a requirement of The Lakes that all producers must register with The British Egg Industry Council (BEIC). The scheme is independently audited and provides assurance that the eggs are produced to the highest standards of food safety.

The farms must also be inspected by Freedom Foods which is a scheme set up by the RSPCA in 1994. The scheme consists of strict RSPCA welfare standards which cover all areas of egg production.

Benchmarking and conservation

At least once a year, producer farms are provided with benchmark data (including eggs laid, mortality rates, egg size, birds housed, average lay and profitability) demonstrating performance within the group and suggestions for improvements. As the company is still relatively small, figures are collated easily, enabling the business to react quickly to any trends or potential issues that are identified.

David insists that the suppliers' farms are registered under the DEFRA–funded Entry Level Scheme (ELS). This programme encourages farmers to deliver simple yet effective environmental management, with a wide range of over 50 options to choose from, such as hedgerow management, stone wall maintenance and low input grassland. This fundamental requirement demonstrates David's commitment to conservation and ensures that his suppliers follow in his approach.

One producer is currently in the process of re–wetting fields to provide a habitat for wading birds. Other farmers have progressed from the ELS and entered the Higher Level Scheme (HLS), which aims to deliver significant environmental benefits in high priority situations and areas.

ET EN

Participation in assurance and management schemes ensure that the farm produces eggs to a high standard while also addressing local environmental concerns.

Staff

Good wages and training

David employs 60 full–time staff at the packing station. Starting pay is at least 10% above the minimum wage and after two months this increases a further 5–10% based on a continuing scale of increments for further skill development.

ET

Staff are well looked after both in terms of compensation and training and development.

All staff receive training in food hygiene, in addition to specific job training. David runs courses for his farm staff and all the supplying egg producers, engaging the services of training specialists on particular topics of interest. Topics have included food hygiene, hen care/handling, animal welfare, rodent control, new regulations affecting egg production, veterinary health planning, nutrition and statutory salmonella testing.

Animal welfare

Reducing stress for the birds

The Lakes is dedicated to the welfare of the birds, and work to reduce stress to the animals from the early stages of bird production, by using only well–reared birds and practices that minimise stress.

The Lakes now have their own pullet rearing operation, so effectively all pullets are reared 'in house'. Rearing sites are small, well managed and they provide birds which are reared specifically with David's production system in mind. The pullets receive a comprehensive vaccination programme and a rearing plan is in place, allowing the birds to grow for a longer period of time, before being despatched to the layer units.

The rearing units are purposely sited within a two–hour travelling distance of the laying units which further minimises stress on the birds. Once the birds arrive on the laying units several aspects of feeding and management are similar to the pullet rearing facilities which again reduces stress. David uses wheat straw on a section of the building floors which allows the birds to scratch and peck. Once the range is made available to the birds they are able to walk around outside in planted areas which encourage them to roam (see below – Tree Planting).

ET

Operational practices are adopted that minimise stress on the birds.

Feed and medicines

Feed is all from one source and in view of the productivity is of the highest quality possible. All feed is approved and authorised by The Lakes, contains no artificial yolk colourants or Genetically Modified materials and is fully traceable.

The use of all medicines throughout The Lakes farms is therapeutic. No prophylactic use of medicines is undertaken and even wormers are only used after worm sampling has identified the need to do so.

All birds are vaccinated against Salmonella Enteritidis and also Salmonella Typhimurium, the Lakes was the first company in the country to do this for all production.

> "We are really supportive of all the work McDonald's is doing to improve the welfare of the birds. We have already given McDonald's a Good Egg Award for its commitment to free–range egg sourcing and we're really pleased it's working closely with FAI and suppliers like The Lakes to highlight best practice such as giving birds tree cover. We're also really pleased to see such a well known brand profiling welfare as a priority alongside it's other responsibilities to the environment and communities. Animal welfare is rated as one of the top consumer concerns in the UK and we're proud that McDonald's is responding by showing it off to its customers and the wider industry."
>
> Steve McIvor, Director of Food Business, Compassion in World Farming

Tree planting

The suppliers contracted to The Lakes are required to plant trees that cover at least 20% of the bird range. Tree planting is carefully planned by an expert tree consultant, with consideration given to local site variations and characteristics, and with both fast–growing and traditional tree varieties being planted. This ensures that the habitats provide optimal benefit to both the birds and to the native wildlife, while blending in to the surrounding landscape. The consultant also ensures that fewer trees are lost in the early stages of growth.

ET

EN

Tree planting enables birds to exhibit natural behaviours whilst also providing environmental benefits.

The primary benefit of the tree planting programme is improved bird welfare. The trees provide cover for the birds, which encourages them to range (roam) outside the buildings. Research clearly links increased ranging behaviour to improved bird welfare. The secondary benefit of the tree planting programme is environmental; the programme provides increased biodiversity and helps in the reduction of greenhouse gases. In addition, on David's farm, trees have also been planted in areas which are difficult to farm with conventional machinery and techniques (such as awkward field corners and steep banks), ultimately increasing the biodiversity of the farm and surrounding area.

Over 300 acres of trees have been planted across The Lakes as a company, and over 6,000 acres of Cumbria are part of structured biodiversity planning through the efforts of The Lakes and its suppliers.

Facts: Ethical benefits of tree planting

Injurious feather pecking is one of biggest welfare issues for free range laying hens. A working group was set up by McDonald's comprising McDonalds, FAI, Noble Foods and The Lakes in recognition of the need to look at ways of improving the welfare of free range laying hens.

In the UK laying hen range is often a barren grass area with limited overhead cover. Overhead cover is very important to domestic poultry which have evolved from a jungle species and are very aware of aerial predators.

Results: Evidence shows that by providing a minimum of 5% tree cover, planted close to the house and with good canopy coverage reduces feather damage due to injurious feather pecking in laying hen flocks. Tree cover provision may also provide environmental benefits such as soil stabilisation, reduced nutrient leaching and carbon sequestration.

Facts: Economic benefits of tree planting
In 2007 The Lakes and Noble Foods were required to plant a minimum of 5% of the range with trees. Producers noticed that since tree planting there were fewer egg seconds and lower bird mortality.

Egg seconds due to poor shell quality are a significant cost to the egg industry (in the UK, a seconds egg is worth approximately 30% that of a Grade A egg) and bird mortality represents an economic cost to producers since birds that die during lay have already consumed feed (and other) resource, and thus fewer birds per house produce fewer eggs.

Results: In flocks with tree cover there were significantly fewer 45 week and over packing station egg seconds (4.8 %) than flocks without tree cover (5.9%). There was also lower mortality in flocks with tree cover (10.6%) than flocks without tree cover (13.8%).

Facts: the envionmental benefits of tree planting
- The generally accepted carbon storage of a mature broadleaf tree is up to 1 ton per tree.
- New UK tree plantings by hectare are less than 25% of the level in 1971.
- UK forests annually store the carbon equivalent of the emissions from 3 million cars.

(Sources: Carbon Responsible; Forestry Commission; Scottish Forestry Trust)

Energy efficiency

Building design and structure

The Lakes requires that suppliers' buildings are constructed so that they are multi–purpose and can be used for storage, or for housing livestock, should the commercial climate change. This gives farmers a sound investment while not tying them in to egg production on a long–term basis. There are no complex electrical systems as the houses are designed to be naturally ventilated. This gives a reduction in energy usage of up to 70%, compared to mechanical ventilation. Extra pop holes are also constructed which make it easier for birds to go outside.

One very important consideration in laying bird housing is red mite control. Red mites feed on the blood of birds at night when they are roosting and can have devastating effects on bird welfare, egg production and quality. Mites need cracks and crevices to hide in during the day and the materials used for house construction are a significant factor in control. The use of concrete panels instead of wood in The Lakes suppliers' buildings discourages mites. Drinking and feeding systems are also selected on the basis of not providing areas for red mite to flourish.

EN

EC

ET

Builidings are designed to be multi–function, require minimal artificial ventilation and promote animal welfare.

Sufficient high quality production

High average egg yields

The Lakes producers achieve consistently higher average egg yields when compared to the UK standard.

Egg production to 72 weeks.

Year	Average yield for all lakes producers	UK average yield across all systems
2003	307	298
2004	308	301
2005	304	304
2006	306	298
2007	309	No data
2008	308	285
2009	307	285
2010	309	285

The farm laying units achieve lower mortality rates than the documented breed average.

2007 Mortality figures for all flocks.

Age (weeks)	Breed target (%)	Actual for Lakes flock (%)
20	0.25	0.17
25	0.50	0.54
30	1.00	1.19
35	2.00	1.69
40	3.00	2.14
45	4.00	2.75
50	5.00	2.80
55	6.00	3.95
60	7.25	4.60
65	8.50	5.50
70	10.00	7.00

Community

David and The Lakes Free Range Egg Company have invested over £4 million into the local economy during the last year, through wages, local contracts and spending. After the foot and mouth outbreak in 2001 the area was badly affected and traditional agricultural enterprises were economically unviable. The Lakes has provided local farms with a profitable diversification venture.

New farms are offered a minimum 3 flock contract with limitless free help and advice offered by David and his management team.

Appendix

The following matrix has been developed by McDonald's to help assess the sustainability of the agricultural production within the supply chain. Flagship Farms have been identified that demonstrate best practice in one or more of the 16 key areas in the matrix, whilst also operating to general high agricultural standards in all other areas.

A ✓ in the matrix below indicates good practices demonstrated in this case study.

Ethical (Acceptable Practices) ET

Human health & welfare ✓
- i Employee health & welfare
- ii Food safety ✓

Animal health & welfare ✓
- i Nutrition
- ii Medication & growth promoters
- iii Genetic selection
- iv Animal cloning
- v Husbandry ✓
- vi Transport
- vii Slaughter

Business ethics & supplier relationships

Rural landscape preservation ✓

Environment (protecting the planet) EN

Climate change
- i Greenhouse gas emissions
- ii Energy efficiency & renewables

Natural resources – soil
- i Soil fertility & health
- ii Soil erosion, desertification & salinisation
- iii Soil contamination

Natural resources – water
- i Water pollution
- ii Water usage efficiency

Natural resources – air
- i Air emissions

Agrotechnology
- i Agrochemical usage
- ii Bioconcentration & persistent organic pollutants
- iii Genetically modified organisms

Ecosystem protection ✓
- i High Conservation Value Land (HCVL)
- ii Habitat & species preservation ✓

Waste
- i Production waste
- ii Hazardous waste
- iii Waste to landfill

Economics (long–term economic viability) EC

Sufficient high quality production ✓
- i Producer income security & access to market ✓
- ii Agricultural input costs
- iii Crop & livestock disease ✓

Community investment ✓
- i Local employment & sourcing ✓
- ii Support for community programmes