



Nuffield Farming Scholarships Trust
A Royal Welsh Agricultural Society Award

Marketing mutton

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1. Executive Summary



Traditionally mountain sheep farmers, including my family, have always eaten the meat from older animals (mutton) of their own flocks instead of the higher value lambs. Mutton has a stronger texture than lamb but, when cooked for a longer time, has a great rich, deep flavour.

Seven years ago we started a diversification project to sell mutton from our farm direct to customers, focussing on the fine food market place. This was challenging but very profitable as there was a surplus of older sheep, which were almost worthless at that time.

Shortly after we had begun to sell mutton, HRH Prince Charles started the “Mutton Renaissance Campaign” to promote mutton to high-class restaurants and butchers’ shops.

Over the last three years, due to changes in sheep numbers worldwide, the price of sheep has risen dramatically. This is welcome news for sheep farmers but has made adding value by processing and retailing lamb and mutton very challenging.

My Nuffield Research project was “Marketing Mutton”, and my plans were to travel and research examples of good marketing of mutton around the world. After the Contemporary Scholars Conference in Washington DC and Pennsylvania I went to Kentucky in the USA to visit some great examples of mutton being promoted to Westerners. The practice could be traced back to Welsh settlers. The barbecued mutton in diners and restaurants in Western Kentucky was delicious and the best marketing of mutton I discovered. A food tourism destination has been created around barbecued mutton.

Detroit has a huge Middle Eastern population so it was an essential visit for me before I left the USA. This is where I first encountered the word ‘mutton’ used as a generic term for lamb, sheep meat or goat!

China has the largest sheep flock in the world so I joined some of my fellow Scholars on a research trip to this fascinating country. I soon discovered that the quality of meat was not important but quantity was everything. With the huge population to feed, lambs were kept up to two years of age with carcasses of up to 35kg. The UK average is 19kg.

After a brief visit to Cambodia, an importer of Australian mutton, India was my next destination. India has more vegetarians than the rest of the world put together, yet still possesses the third largest sheep flock in the world! India is also home to more mutton-eating Muslims than any other country.

My project now took me in a new direction, with research into the Muslim population and the global sheep industry being my new objectives. I was now beginning to realise that Muslim demand for sheep meat would have a bigger influence on profits from selling mutton than the best marketing possible. Mutton has a superb depth of flavour that is far superior to lamb for long slow cooking. It is perfect for casseroles, hotpots and broths, as well as for slow roasted legs and shoulders. But I was starting to realize that trying to convince the wider public at large was going to be an uphill struggle.

I have therefore discontinued working hard selling mutton to Westerners and am now concentrating my sheep business on supplying mutton and lamb to the Halal market, to coincide with the various festivals. There are opportunities for sheep farmers to work with the Muslim community and I am



making suggestions to the industry for ideas to connect the ethnic customers of mutton with the sheep farmers in the UK.



2. Introduction



I live with my wife, Angela, and four children at Henfron Farm in the Elan Valley in Mid Wales. We are tenants of a 1700 acre mountain sheep farm in the centre of a 45,000-acre estate which is owned by Welsh Water. Henfron Farm over looks Garreg Ddu Reservoir, one of a series of five dams built in the 1890S to supply the City of Birmingham with water.



Tony on Seren above Henfron Farm and Garreg Ddu bridge reservoir

I am the fifth generation to farm at Henfon. My Great Great Grandfather moved there in 1859 from a smaller farm further down the valley.

Henfron Farm has no mains services, water or national grid electricity supply. Access to the farm is up a long stone track so, even though the views are beautiful it is quite a challenging place in which to live and run a business. Historically a diesel engine generator supplied all our electricity but over 20 years ago I installed wind turbines, and more recently added photovoltaic solar panels to cut down on the use of the diesel generator. This has been a useful and money saving hobby. I have also designed and installed similar systems in other off grid properties. In truth I have always had a slight obsession with renewable energy!

Our flock of Welsh Mountain sheep are a small hardy breed, which thrive on our range of mountain grasses and cope well with the cold, wet winters. It rains 250 days every year. Our average rainfall is 80 inches each year so water shortages are not a problem for us. Birmingham built the dams here for a very good reason. Ninety per cent of the farm is unfenced moorland so we rely on our neighbours to help us gather our sheep using a mixture of quad bikes, horses and plenty of sheepdogs.

The lambs from our flock are also very small and even though the meat is very tender and tasty there is little demand for this small size carcase in the UK. However there is a large demand for lighter lambs in southern Europe (Italy, Greece and Spain). This market is very volatile and changes in the world market place and currency fluctuations create large variations in the lamb prices we receive. Currently, due to the weak Pound, stronger Euro and diminishing amount of lamb and mutton being imported to the EU from New Zealand, the prices are at their highest level ever.

I took over the tenancy of Henfron Farm from my father in 1999 and initially followed the tradition of keeping as many ewes as possible, aided by the generous EU sheep headage payments. Concentrating on high sheep numbers was to the detriment of improvements in the breeding or



productivity of the sheep. This was a very high input system. Keeping more sheep than the farm could sustain naturally meant high feed bills and grass keep costs (large areas of extra grazing land rented from lowland farms during the long winters). The financial return from lamb sales was small but compensated for by the headage payments.

In 2002 The Common Agriculture Policy (CAP) Reforms were announced. Sheep headage payments were going to be discontinued. Headage payments had first been introduced shortly after the Second World War so this change was to have a massive effect on the management of mountain sheep farms that have historically been fairly dependent on these payments. Sheep would now have to be profitable so I had to rewrite my business plans. I took the decision to join the "Tir Gofal" (an agri-environmental scheme introduced by the Welsh Assembly Government) and convert the farm to organic status. A very low input system with improvements in the quality and size of the sheep was my new business plan.

Sheep numbers had to be drastically reduced on our farm and I was very disillusioned with the prices I was receiving for the surplus ewes. We regularly enjoyed eating mutton from older sheep on the farm so Angela and I launched "Elan Valley Mutton" as a diversification business to sell mutton as a "high quality, free range, grass fed product". Reducing sheep numbers on the farm had freed up a lot of time that we were able to commit to the new business.

We were very fortunate that the media liked us, our story and the views from our farm, so we soon had local and national coverage both in the press and on television. Our own slow roasted leg of mutton beat both Welsh Beef and Welsh Lamb at the prestigious True Taste awards, a testimony to the delicious flavour of our products.

After I had sold all the surplus stock from our own farm through Elan Valley Mutton I bought in sheep from other farmers in the Mid Wales area.

Our customers included some of the famous celebrity chefs. This was great for promotion but in truth a lot of the high class restaurants who used us for their publicity only bought mutton occasionally. The volume was tiny compared with the quantity of beef, lamb and pork etc. sold in the same restaurants.



3. My Project



My Nuffield project 'Marketing Mutton' was to look at how mutton is marketed around the world and how improvements could be made in the UK industry. This in turn could help increase profitability for sheep farmers. My initial research uncovered the fact that some mutton is 'dressed up as lamb' and this made some of my research very difficult due to fears of bad publicity.

The phrase "Mutton dressed as lamb" is the commonest use of the word mutton. Now used to describe a middle-aged or elderly female dressed up trying to look younger, it was originally coined by butchers trying to sell cheaper mutton as the more desirable and expensive lamb.

The word "dressed" described the butchering or cooking of the meat.

3a. History of Sheep

After dogs, sheep were the second animal to be domesticated by man 10,000 years ago; they are often described as doing more to help man over the centuries than any other domesticated animal. Sheep have provided man with warm clothing, meat, milk and skin.

Over the centuries sheep have been reared mainly for their wool. Ewes (female sheep) would have a crop of lambs each year; the male lambs would be castrated and called wethers. The wethers would grow a profitable large fleece of wool each year whilst the ewes, with the constraints of pregnancy, would produce a smaller fleece.

Mutton was a staple part of the British diet and much praised by Mrs Beeton in her Guide to Household Management, 1861

Lambs were rarely eaten; it was more profitable to harvest a crop of wool from a sheep each year, as it would grow into a larger carcase by five years of age.

In the 1880s the first shipload of New Zealand lamb came to the UK. It was a new concept for the British and was also very expensive. Only the rich had the opportunity to consume lamb but despite the general public's initial reluctance to eat 'baby animals' the product was very successful. During the early 1900s the price of wool collapsed so more British farmers started selling the male lambs for meat. Improvements in breeding also meant a better carcase size was now available from younger sheep (lambs).

Both World Wars contributed to the demise of the flocks of wethers still on mountain farms. The price of meat became so high that young non-breeding sheep (wethers) were sold into the marketplace.



In 1947 the government introduced sheep headage payments to encourage farmers to keep more sheep. The payments were for female sheep only so this subsidy quickly put an end to the traditional practice of keeping the male wether sheep.

3b. What is mutton?

Mutton in the UK is the word used for the meat from adult sheep, which means a sheep normally over two years of age

The UK market for mutton which dwindled after the Second World War made mutton almost worthless. It had fallen from favour as lamb became the more popular of the two meats. Later as immigration to the UK increased new markets for mutton developed. Muslims, Sikhs and Jamaicans all prefer mutton to lamb because it is far better suited to their traditional slow cooked recipes.

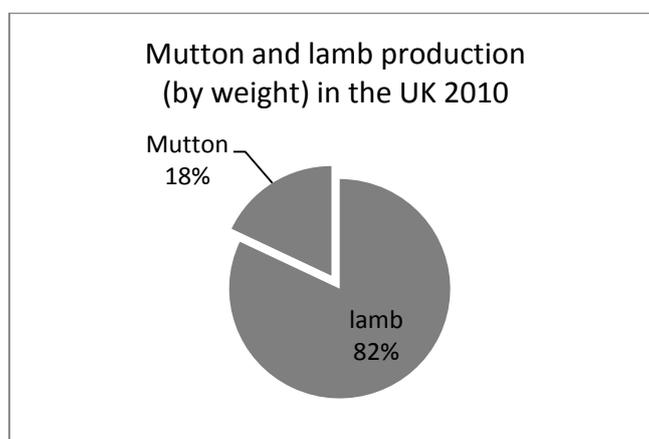
Most mutton produced was from ewes at the end of their productive life. It became more viable to produce a lamb for meat in six months than keep sheep for at least two years. Being younger meat lamb was much easier and faster to cook, a boon for the busy housewife, but it did lack some of the great taste and meatier flavours of mutton. If mutton is under-cooked it could be tough and chewy and it was during this period mutton gained its bad image and the phrase 'mutton dressed as lamb' was born.

Who produces mutton?

Sheep farming is primarily aimed at lamb production with only a very small number of sheep now kept for wool production and in my opinion this is unlikely to change. Even where sheep are kept just as grazing tools to comply with environmental schemes it is not a viable option to grow castrated male lambs into older sheep just to produce mutton. Even though a larger carcass can be achieved the price for mutton compared to lamb is less so benefits in weight will be lost in lower price per kg.

I have already established that mutton is a by-product of lamb production. Volumes of mutton available are dependent on the profitability of lamb production and the world sheep flock size.

In the UK approximately one mutton carcass is sold for every six lamb carcasses. The average size of a mutton carcass in the UK is 25kg compared with 19 kg for lambs. I estimate approximately 18% of all sheep meat produced in the UK is mutton. It has been impossible to research similar figures in other countries I have visited but I assume the figures would be similar to those shown below for the UK.



Graph compiled with figures supplied by Defra.



3d. Who eats mutton?

Worldwide the word mutton has many uses. In India and China mutton is normally sheep meat (lamb or mutton) although in some parts of India mutton is the generic term for meat, e.g. goat mutton, camel mutton and sheep mutton.

In Detroit for example I visited the 'Eastern Markets' a wholesale meat market for the large eastern population. Very early one morning I was taken into a large cold store and shown a lot of supposedly mutton carcasses. I recognised a large number of lamb carcasses but no mutton carcasses as in older sheep. I enquired where the mutton carcasses were, only to be told that goat, lambs and sheep are all the same. I did recognise some mutton carcasses hanging in another meat wholesaler's cold store but the butcher insisted that he had bought lamb carcasses. I think it depended on who the customers were as to whether it was called lamb or mutton. A mixture of USA and Australian mutton was for sale in the markets; the USA is the second largest buyer of Australian mutton. USA sheep numbers are decreasing at a similar rate to those in other Western countries.

Cambodians hold Australia in high esteem; 'Australian Mutton' is a selling point on the menu. No commercial sheep are farmed in Cambodia, only small flocks kept by the Muslim population for their own use. I was informed that only mutton (which was cheaper than lamb) was imported from Australia. Approximately half the mutton sold was labelled as lamb in the various restaurants, which were mainly run by Indian Muslims.

3e. Mutton versus lamb

Mutton carcasses are normally larger than lamb, but the percentage of meat on a mutton carcass is lower than on a lamb carcass. This is because the skeletal frame is stronger and larger and the bones denser and heavier than lambs'. Fat is a lot firmer and there is normally more internal fat on mutton carcasses than lambs. Sheep tend to deposit external fat before internal, so the older the animal the more the likelihood of internal fat. Overall fat content varies hugely due to the condition of the sheep during its lifetime.

Variations in breed, age and feed all ensure less consistency of mutton compared to lamb carcasses. Mutton is easily distinguished from lamb as the meat is very much darker compared to the pink flesh of lambs.



Legs of Mutton



Sheep are at their most productive between 3 and 6 years of age and are normally culled at around 7 years of age. Sheep's teeth start to decay at about 4 years of age and once the front teeth become loose or drop out the ability to graze the sparse vegetation in the mountains diminishes. Mountain ewes are often sold on to lowland farms where they can easily breed for another 3 years because of better pasture and more of the diet consisting of silage, hay and cereals. This improved diet usually ensures a good covering of meat by the time the animals are culled for other health problems. Carcase sizes from the mountain sheep are typically in the 15 – 21 kg range.

The larger lowland ewes produce larger carcasses but because of a lifetime on better pastures they tend to have more internal fat, which reduces the carcasse value.



Mutton carcasses in Kentucky.



4. Marketing



Marketing Mutton is more challenging than the promotion of most other food products because of poor public perception. On a visit to the “Annual National Restaurant Association, Restaurant and Hotel-Motel Show” in Chicago I found no evidence of mutton advertised in any of the 1400 food connected stands. Over 40 of these were meat retailers including companies from New Zealand, Australia, Canada, and Chile. A wide variety of food was present to supply the multi-cultural population of the USA



Restaurant show in Chicago

“The best thing you can do is keep your mutton on your side of the pond”. Comment made to me by member of staff on a North American meat stand. He assumed I was looking for an export market.

After some investigation I discovered several examples of lamb salami, lamb sausages, lamb pies and Halal meats all using mutton in their recipes. Overall the food marketing at the event was brilliant with companies competing to have the biggest presence using the biggest and highest banners. This “size is everything” phenomena was very noticeable across the USA and very different to the more reserved design type of marketing present in the UK.

People in the USA generally have a very poor perception of mutton; one of the reasons being that canned mutton from South America has been a diet of American soldiers for many years. This has been in many guises, the most common being 'corned mutton'. These products have put a lot of people off lamb as well as mutton.

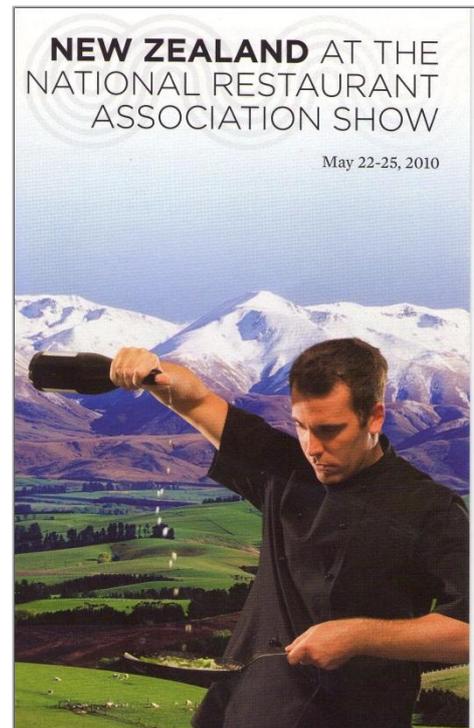
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The pictures on below show that both China and New Zealand use green pastures and snow-capped mountains for lamb marketing purposes.



Poster at the Chinese Agriculture Trade Fair.



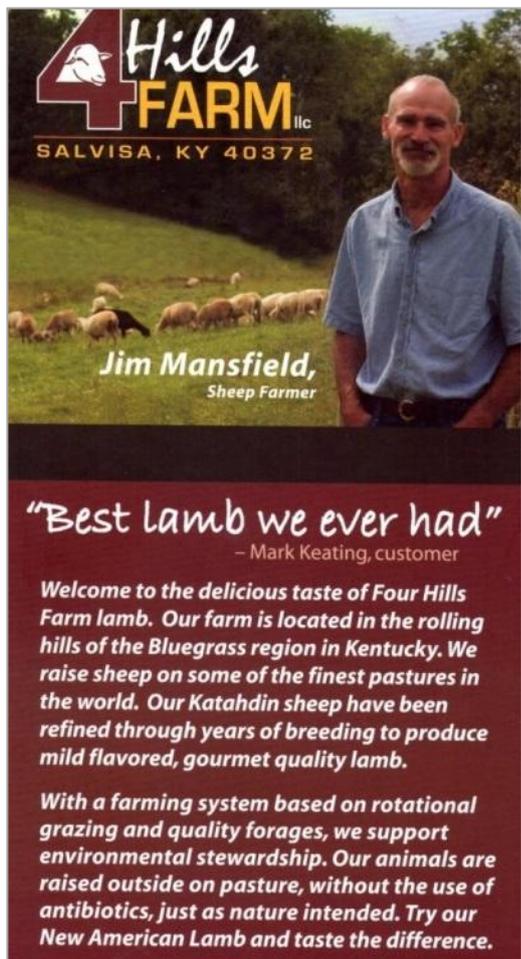
Leaflet at National Restaurant Show in Chicago



Chinese meat market

At the 'Chinese Agriculture Trade in Zhengzhou, China, posters for advertising Chinese lamb had an organic logo in the foreground. An organic market was just starting in Chinese cities. Even though this is excellent marketing and promotion most Chinese lamb and mutton is sold at village markets. There is very little refrigeration so the farmers slaughter sheep fresh each morning for the markets. The head of the sheep or goat is always displayed – the bright eyes prove how fresh it is. Customers only want to buy meat that is freshly slaughtered.





4 Hills FARM llc
SALVISA, KY 40372

Jim Mansfield,
Sheep Farmer

"Best lamb we ever had"
– Mark Keating, customer

Welcome to the delicious taste of Four Hills Farm lamb. Our farm is located in the rolling hills of the Bluegrass region in Kentucky. We raise sheep on some of the finest pastures in the world. Our Katahdin sheep have been refined through years of breeding to produce mild flavored, gourmet quality lamb.

With a farming system based on rotational grazing and quality forages, we support environmental stewardship. Our animals are raised outside on pasture, without the use of antibiotics, just as nature intended. Try our New American Lamb and taste the difference.

A great example of marketing is Jim Mansfield, 4 Hills Farm in Kentucky. (The Katahdin breed is a wool-less, meat type sheep).



Can you spot the dog? Sheep in Kentucky

"The biggest threats to sheep in Kentucky are dogs killing the sheep. Coyotes crossed with domestic dogs hunt in packs. Pyrenees mountain guard dogs live with the sheep. Can you spot the dog in the picture above?"

4a. Meat promotion boards

Sheep farmers normally sell their cull ewes at livestock markets.

Meat promotion boards undertake the development, promotion and marketing of the meat products on behalf of the farmers and charge the farmers a levy per sheep sold for slaughter. With large budgets national and international advertising campaigns can be achieved.

The chart on the next page names the international Meat Promotion Boards

Country		
Wales	Hybu Cig Cymru/Meat Promotion Wales	HCC
England	English beef and lamb Executive	EBLEX
Scotland	Quality Meat Scotland	QMS
USA	American Lamb Board	
China	Chinese Meat Association	
India	National meat and poultry processing board	



English and Scottish farmers pay 60p per head while Welsh farmers are charged 63p. The abattoirs pay the levy boards another 20p per sheep.

4b. Mutton Renaissance Campaign

In 2004 Prince Charles was visiting sheep farmers in County Durham and heard of the low prices being received for their older ewes. As mutton was one of his favourite dishes he thought it would help farmers if he could boost the sales of mutton

After discussions with the Academy of Culinary Arts and the National Sheep Association the “Mutton Renaissance Campaign” was launched. EBLEX and HCC use part of their levy monies to part fund the Mutton Renaissance Campaign

The campaign is dedicated to the promotion of mutton and focuses on educating everyone about the benefits of mutton. Its aims are to develop a quality niche market to supply the restaurant trade. Various promotional events are held in restaurants and on farms, the most recent being a Mutton Renaissance Student Chef Challenge.

The excellent entries included: braised mutton neck, mutton cutlets, mutton sausage, mutton faggots and mutton and caper pudding.

The campaign has introduced specifications for Renaissance Mutton:

On farm

Renaissance Mutton must be produced to a Farm Assurance standard.

Eligible sheep must be over two years of age. To be confirmed by either documentation or dentition

- Eligible sheep to be either female or castrates. Entire males are not acceptable
- All eligible sheep must be traceable to the farm where they have been produced
- There are no breed specifications
- Finishing diet to be forage-based, grass, hay, silage, turnips, swedes, etc. augmented by farm-produced straight cereals when necessary (barley, oats, etc.)

In the abattoir

- Carcase classifications of E,U,R or O for conformation, fat classes 2, 3L, 3H or 4L are required.
- Carcase or cuts to be matured for at least two weeks

“Mutton is to lamb what beef is to veal”
Hugh Fearnley-Whittingstall, River Cottage Meat Book, 2004



5. Cooking and Eating Mutton



5a. American Barbecue style

In Kentucky, local churches hold summer picnics every week during the summer months and the choice of meat has always been mutton. This is a tradition which has carried on for a long time and several thousand people attend the events. The churches have their own cooking pits and the mutton is always cooked very slowly and marinated regularly.

The town of Owensboro in Western Kentucky is known as “The Bar-B-Q Capital of the World” and hosts 90,000 visitors every year at the International Bar-B-Q Festival. Here over 150 mutton carcasses (ewes) are barbecued by teams from all over the states.

I heard several stories of why the tradition of barbecuing mutton has carried on in this area. My favourite version was that the early settlers were sheep farmers from Wales who kept large flocks of sheep and generously donated old ewes to church picnics.

The Moonlite restaurant in Kentucky is famous for its mutton and up until a decade ago it only sold barbecued mutton. Government standards ensure that real Bar-B-Q is cooked slowly to lose at least 30% of its weight. Even with reduced demand Moonlite sells approximately 4,000 kg of mutton every week. This equates to at least 120 carcasses every week.

Carcasses are split into quarters and cooked over a hickory fire for 12 hours. Because of the long cooking period the mutton is regularly marinated with a vinegar based marinade which they produce themselves.



Moonlite Bar-B-Q restaurant



Mutton cooking in Moonlite

Moonlite also supply their tinned barbecued mutton and barbecue sauces and marinades to supermarkets in Kentucky and surrounding states.

Ken Bosley, the owner of Moonlite, claims to sell more mutton than any other restaurant in the USA. I think it is possible that he sells more than any other restaurant in the World and I have promised to let him know! The ratio of mutton sold to all other meats (mainly pork) in his restaurant is now about fifty percent.

“If you can put your preconceptions aside, you will love mutton. If you like food you will like mutton

Ken Bosley, Proprietor of Moonlite Bar-B-Q



Barbecued mutton is available in most western Kentucky towns and I met several customers from other States who travelled just to try the mutton.

5b. China

The mutton I ate in China was mainly stir- fried. As mutton is better cooked slowly to break down the stronger texture the results of quick stir frying were not very good! Most mutton is sold at a cheap price in the markets or used for further processing in the cities

Roasted whole sheep, which used to be a privilege enjoyed by Mongolian Kings, is now sold to visiting tourists. The whole sheep is filled with spices and then roasted at very high temperatures before being roasted with fire. Other specialities eaten by tourists are steamed dumplings with minced mutton, roast mutton tail, roast mutton leg and mutton barbecue. The local dish is boiled mutton, which is dipped in seasonings when eaten. This dish is popular all over China but personally I did not approve.

5c. India

I have always been a big fan of mutton curry so I was in a culinary heaven in India.

The spices break down the stronger fibres in the mutton, and this combined with slower cooking methods than those employed in China brought out all the best qualities of mutton.

I enjoyed mutton curry at least once (sometimes three times) every day.

5d. Doner Kebabs in the UK

Originally from Turkey, the Doner Kebab is now very successful as a late night takeaway in the UK. The ingredients of the vertical rotating spindle of minced or slices of meat are a mystery to most of the consumers. Even some of the staff when asked about the ingredients were unsure about the origin of the meat. The more knowledgeable staff and public were correct in suggesting lamb but nobody seemed to know that mutton is actually the main ingredient.

The Doner Kebabs are made in factories and delivered frozen to takeaway outlets where they are cooked on the rotating spit. Slices of meat are served with salad in a roll of pitta bread. Some UK mutton is exported to Germany to supply the German Doner Kebab market.

Mutton is the perfect ingredient for Doner Kebabs for the following reasons.

1. The strong texture of mutton binds together better than lamb. This is important because of the long cooking periods for Doner Kebabs, (several days plus reheating in the quieter restaurants).
2. The flavour of mutton is enhanced by some of the spices added to a Doner Kebab. If lamb was used its milder flavour would be masked by the spices.
3. Mutton is generally cheaper than lamb.



6. Muslims

There are over a billion Muslims worldwide who follow the Islam faith and worship 'Allah'. This is the name Muslims use for the supreme and unique God, who is understood to be the creator of the universe.

Muhammad was the last of the prophets; his message was written down and passed on in the words of the Qur'an. The Qur'an is considered by Muslims to be the sacred word of God.

6a. Halal

The word '**Halal**' is used in the Qur'an and means permissible.

'**Haram**' means prohibited and includes the following:

- Pork and its by-products
- Animals improperly slaughtered, or dead before slaughtering
- Animals killed in the name of anyone other than Allah
- Alcohol and intoxicants
- Carnivorous animals, birds of prey and land animals without external ears

Under the Qur'an all meat must be slaughtered Halal fashion.

The method of slaughter is a very controversial subject and not always understood by the general public. Halal slaughter demands that the animal is alive at the point of cutting the throat to ensure that all the blood will be pumped out. Muslim perception is that all the impurities will have been removed.

The general Public, including Muslims, mostly assume that sheep are not stunned before slaughter. In reality this is not the case. Even though there is a derogation allowing the throat to be cut without stunning, the majority of abattoirs would prefer to stun. Stunning makes the process easier for the slaughtermen and enables higher throughputs of sheep numbers.

At the point of slaughter the sheep must be facing Mecca, Saudi Arabia, (where Mohammed lived) and a prayer to Allah is read by a Muslim.

Approximately one fifth of the world's population is Muslim and Muslims consume most of the mutton in the world.

In the UK Muslims accounts for 4% of the population (approximately 2.5 million) but consume 20% of the lamb and mutton produced, including 95% of the mutton.

6b. Islamic Festivals

Ramadan is the name of the ninth month. Muslims fast during daylight hours and feast late in the evening. Although food cannot be eaten it can be prepared and cooked during the daytime, so mutton, being suited to slow cooking, is perfect for the late night meals.



The end of Ramadan is celebrated by Eid Ul-Fitr, which is in part celebrated by a feast when large amounts of lamb, mutton and goat are consumed by Muslims worldwide.

Several million Muslims from all over the world make a pilgrimage to Mecca, in Saudi Arabia, for the Eid-UI-Adha festival in the twelfth month. All Muslims should, according to the Qur'an try to attend once in their lifetime. Vast numbers of sheep are sacrificed to feed the huge crowds.

Muslims who cannot attend the festival celebrate Eid-UI-Adha by buying a sheep carcase from their Halal butcher to celebrate at home.

Sacrificing a sheep is also the favoured method of celebrating the birth of a child. In the UK this is not possible so again Halal butchers supply lamb or mutton, usually in carcase form.

As pork is prohibited under the Qur'an, lamb and mutton are regularly eaten by Muslims all the year round.

The Muslim calendar is made up of twelve lunar months, which make the Islamic year approximately 10 days shorter than the western Gregorian calendar. The dates for the two main festivals are approximately 10 days earlier in our season every year.

2011 Muslim Festival dates

Ramadan	1 st – 30 th August
Eid-UI-Fitr	31 st August – 2 nd September
Eid-UI-Adha	6 th November

According to a document entitled 'The Halal Meat Market' researched by the 'English Beef and Lamb Executive' and 'Agriculture and Horticulture Development Board' more mutton than lamb is sold in Halal butchers' shops because it is more suitable for Asian dishes and it is cheaper. Muslims of Pakistani, Bangladeshi, Caribbean, Sri Lankan and Somali ethnic origin prefer mutton whilst Middle Eastern, Arab and Turkish customers apparently prefer lamb despite its price premium over mutton.

There are several Halal certification bodies and each has slightly different standards, which I found quite confusing. That made me realise how confusing all the different standards we advertise on food in the UK must be to the consumer.



Butcher's shop in Birmingham



Shop window



Almost all Muslims use Halal butchers. They trust the butchers' word more than any of the Halal certification standards. The butchers in turn trust the abattoirs or middlemen who are almost always Muslim.

Generally 50% of Muslims buy mutton on a regular basis. This is normally purchased from Halal butchers, who have a full range of cuts available to suit all the national dishes. The option of buying half mutton carcasses (split carcasses) is also available in most Halal butchers' shops. Supermarkets in areas with strong Muslim communities are starting to have Halal butchery counters which sell mutton.

6c. Goats

I discovered early during my travels that over half the world's population call goat meat 'mutton' so now I am going to divert from my "sheep" subject.



The first thing I learnt in India was how to tell the difference between sheep and goats. The very simple way is to look at the tail. A goat's tail stands upright whilst sheep's tails hang down!

In India although sheep numbers are approximately 60 million, goat numbers are over double. They don't generally need shearing and are easier to keep than sheep but not as prolific. In the mountains of Rajasthan in India, the Hindu sheep and goat farmers

keep about 100 sheep/goats each and graze the scrub in the mountains. The sheep and goats are taken up into the mountains every day to graze the scrub. I thought the goats had a better future than sheep as they goats looked in better condition. The sheep also needed shearing three times a year to prevent them getting stuck in the scrub.

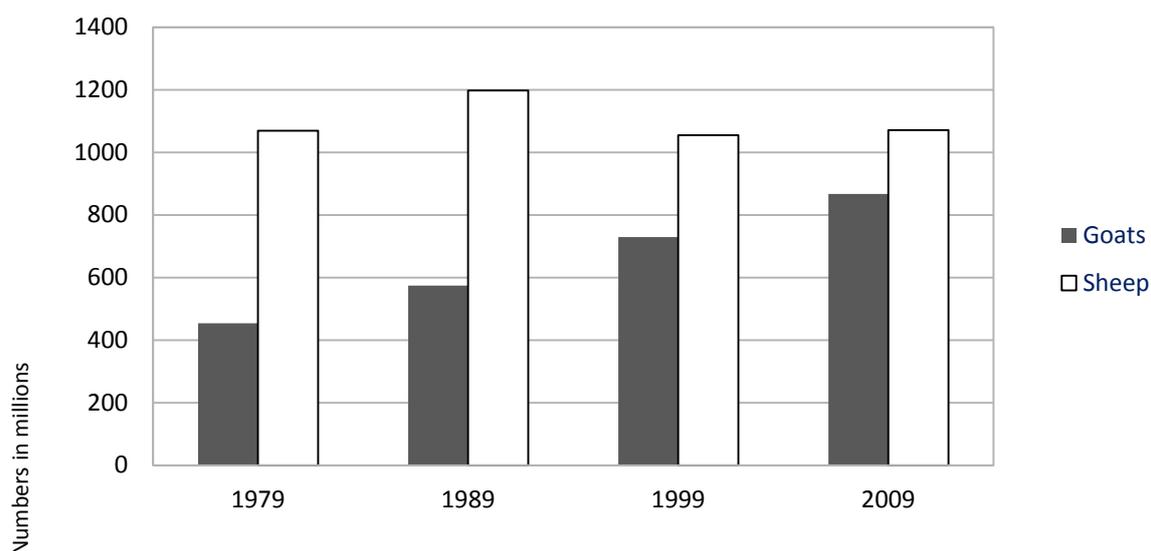


Sheep Shearing in India



The Hindu farmers are vegetarian and, because of the possible leather content in the soles, no shoes or sandals were allowed into the shearing yard on the sacred occasion of shearing. Their sheep are sold to traders who would then sell on to the Muslims farmers. They fatten up the sheep and goats in preparation for Muslim festivals. The Hindu seller and the Muslim buyers seemed to have no direct contact with each other, possibly because of their religious differences and possibly the Hindu farmers didn't want to think about their sacred sheep being eaten!! I just thought they were very lucky to have over a 100 million Muslim customers on their doorstep.

Sheep & Goat numbers worldwide



Graph compiled with figures from FAOSTAT

As this graph shows, while sheep numbers have stayed the same goat number are rising year on year. Goats have increased by 450 million to a huge 860 million in the last thirty years and, if this trend continues, goats could outnumber sheep by 2025.



7. Brief industry overview in the UK



Approximately 1.8 million ewes are culled each year in the UK with approximately 95% going into the Halal food chain. I understand that some mutton goes into processing, ready-meals and pies. Business confidentiality and concerns about bad publicity made my inquiries into this area challenging so I am very grateful for the help and information I have received.



*Cull ewe buyers in
Welshpool Livestock Market*

The normal route for sheep is through livestock markets and into the Halal food chain. Livestock markets play a very important role in the mutton food chain because smaller numbers than lamb are sold from each farm. Livestock markets give the buyers the opportunity to buy pens of similar sized sheep to match their requirements. Even though all lambs sold in livestock markets are graded and weighed before being sold, no cull sheep are graded or weighed. All cull sheep are sold on a headage basis so accurate recording of prices per kg liveweight is not possible.

I joined the Nuffield Global Focus tour on a fact-finding trip to Brussels and discovered from the European manager of "Meat and Wool New Zealand" that historically UK was New Zealand's biggest mutton customer. Australia are the world's largest exporters of mutton with China being one of their growing markets, but according to an Australian exporter I met in China, a shortage of Australian mutton was restricting this growing market.

Routes from farm to plate in the UK

1.8 million ewes are culled in the UK every year. 95% pass through livestock markets. Most of this would be slaughtered in Halal abattoirs.

The largest share of the market is to Halal customers include Halal wholesale, Halal butchers and Halal export - mainly to France but also some to Germany.

Huge amounts of mutton go into processing for ready meals, pies, catering and the Doner Kebab market.



Finally there is the fine food market place where most 'Renaissance' standard Mutton would be sold through Restaurants, Farmers' markets and farm shops and quality butchers.



8. The future

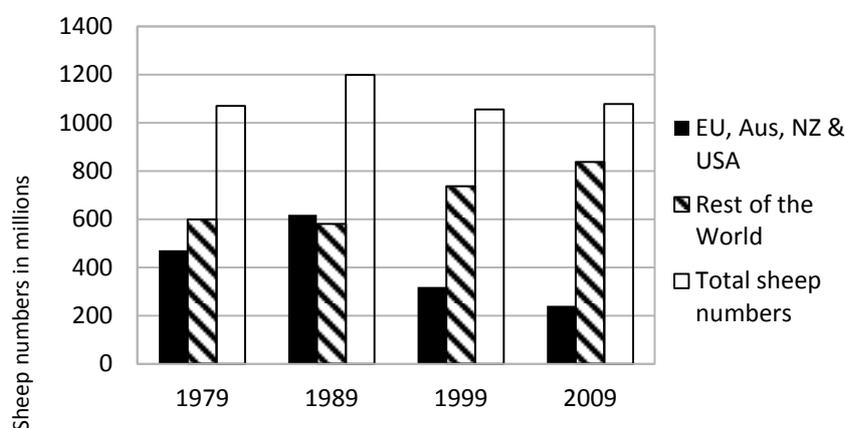


Predicting the future is a challenge, but also the most enjoyable part of desktop research. It is widely assumed that the rising world population coupled with decreasing sheep numbers will ensure a vibrant market for mutton in the future. There are a variety of factors, which I have used to help me with my predictions.

The human population is forecast to rise from the present 5 billion to 9 billion by 2050. The Muslim growth is predicted to be faster than that of other faiths although the increase in Hindus in India who are predominantly vegetarian will balance out some of the Muslim increase.

The world sheep population has stayed roughly the same with a flock size of just over a billion over the last thirty years. The sheep flock across Europe, New Zealand and Australia has dropped a staggering 280 million during the same period. Increases in China, India and Pakistan have helped Asia's sheep numbers increase by 150 million since 1979. Other noticeable increases in the rest of the world include Ethiopia, Uruguay and Sudan.

World Sheep Numbers



Graph compiled with figures sourced from FAOSTAT

With better lambing percentages and improvements in breeding and genetics a smaller ewe base is needed to produce a larger volume of lamb. This will have the effect of reducing the percentage of mutton available from sheep meat.

Mutton is a by-product of lamb production; the only thing that could change this situation is if wool became a valuable commodity again. Sheep could be kept for the annual harvest of wool whilst growing into large carcasses. Current wool prices are at a thirty-year high in Europe due to synthetic fibre becoming more expensive caused by high oil prices.

Common Agriculture Policy (CAP) reform in 2003 removed almost all the sheep headage payments in Europe. This is very unlikely to be reversed so sheep numbers in Europe are unlikely to increase.



9. Conclusions



1. Sheep production in western countries is on the decline, but mutton prices are still rising even when extra numbers of sheep are being put into the market place. In the UK the average price per head in 2007 for cull ewes was £23 per head. At the time of writing this report (July 2011) the average price is £75 per head.
2. I am forecasting that the price will stay fairly close to this level. Now that the profitability of sheep has improved flock numbers should stop declining in Europe. This will create a potential shortage of mutton but more lamb should be available.
3. Mutton Renaissance

Mutton has a loyal following in a niche market so the best quality Renaissance Mutton can be sold at a premium. However not many farmers will benefit from these better prices because the demand and supply chain is not in place. Farmers with close connection to butchers' shops and those selling direct via farm shops, farmers markets and box schemes can use regional and breed specific marketing to command higher prices.

4. Processing

Mutton carcasses are not as consistent as lamb. The range of conformation and fat cover varies broadly which is one of the reasons mutton is used for processing.

A lot of mutton is sold as lamb in pies, ready meals, Doner Kebabs and curries etc.

Mutton carcasses have historically been 50-70% of the price of lamb carcasses but this price difference is getting smaller, now standing at 70-80%.

This rise in prices has created difficulties for processors so cheaper meats are replacing mutton in some products.



10. Recommendations to the Industry



The following recommendations are my thoughts as to how the industry could improve returns for farmers while protecting the valuable markets they have for mutton.

1. Livestock markets

Livestock markets should be questioned as to why they don't weigh cull ewes. Barren cows and cull sows are weighed and in my opinion if sheep were weighed it would add transparency and enable better recording of prices. This would hopefully encourage farmers to present cull ewes in better condition and see improved prices.

2. Levy Boards

The meat promotion boards in England, Wales and Scotland all charge approximately the same levy at livestock markets and abattoirs for ewes and lambs. The UK levy boards do a great job of promoting lamb with recipe leaflets etc. Most of the levy money is spent on lamb promotion which is the biggest market. More work could also be done to bridge the gap between Halal customers and the sheep farms. This could be done in both directions educating the farmers on how important the Halal food chain is, and educating the Halal butchers and customers about the quality of the product they consume.

3. Islamic Festivals

The various festivals fall on different dates every year, so farmers could present sheep for sale just before these events and take advantage of higher prices. Currently only sheep dealers who build up stocks of sheep and some of the more informed farmers profit from the seasonal highs.

4. Mutton Renaissance

The Mutton Renaissance needs to carry on its outstanding work promoting mutton as quality meat. Emphasis on how to cook mutton by educating chefs and housewives is essential. Hopefully as demand increases the supply chain will grow and offer opportunities to more sheep farmers.

5. Sheep Farmers

Mutton is considered a by-product of lamb production by most sheep farmers. The increased prices that are now being obtained are making sales of cull ewes an important part of the returns from sheep production. Farmers are already experts at presenting lambs in perfect condition for slaughter but need to be encouraged to present the cull sheep in the best condition as possible for the Halal buyers.



11. My personal journey



The Nuffield journey has been a very exciting experience. As a sheep farmer from Mid Wales, it has taken me out of my normal comfort zone on a regular basis. After my challenging but successful interview, three days of meetings and visits in London (including the House of Lords and Defra) was my introduction to Nuffield and, more importantly, to the other 20 UK Nuffield scholars of my year group.

I had only just memorised the names of my fellow scholars when we flew to Washington DC, USA, to meet another 30 Scholars from Australia, New Zealand, Ireland, France and Canada. The next 10 days of learning more new names, conferences, team building workshops and some great farm visits in the State of Pennsylvania was exhausting but extremely rewarding. My confidence had greatly improved and I was really looking forward to starting my own travel and research.

My solo travel was a unique experience, a life changing opportunity, but the most rewarding part for me has been the friendship of the other Scholars. Travelling to China, Brussels, Cambodia and India with other Scholars was a truly memorable experience.

During my Nuffield year I have travelled on 27 different flights, as well as spending many hours in taxis, buses and hire cars. This spare time was very useful to reflect on some of the amazing businesses and cultural differences I had encountered. When travelling with other Scholars this spare time was sometimes spent discussing agricultural businesses that we had visited, as well as discussing each other's businesses. The sometimes-interrogative questions from other Scholars about my own business coupled with the different perspective that I was gaining really made me analyse what I was doing on my own farm.



Having fun with the head shepherd of an Inner Mongolian Sheep Research Station.

The feedback was not always what I wanted to hear, but the criticism was normally informative and constructive. This mentoring experience was not in the Nuffield brochure!

I have decided to discontinue selling mutton to Westerners and focus on selling lamb and mutton to the ethnic communities. By forging links with the Halal food chain, I hope to directly sell stock to coincide with the festivals when demand is greatest.

It was while travelling I realised that renewable energy is my speciality subject. I have decided to use my experience and have started a renewable energy business.

I have also taken a huge step and started studying part time for an MSc in Renewable Energy. This qualification coupled with my enthusiasm should enable me to work as a consultant in the future.



Being a very inquisitive person I quite often took a great deal of interest in areas of agriculture that previously I had had very little knowledge about. I became very aware of the potential shortfall of basic commodities in the future due to the rising world population:

Water:

Shortage of Water is the most common worry amongst farmers worldwide. For my farm in the mountains of Wales, I don't think water shortage is going to be a problem. The future will probably be to build more reservoirs in high rainfall areas to store water to distribute to the dry areas of the UK, which are repeatedly having drier years.

Food:

Due to the short growing season and grass being the only suitable crop I am limited in my ability to produce more food from my farm. If I did increase my sheep flock size, it would necessitate buying in more animal feed for the sheep over the long winter. The rising price of cereals would probably make this unviable.

Energy:

Demand for energy worldwide is growing fast and I have had first-hand experience of both the problems and some of the solutions on my travels. In rural Cambodia, electricity was rare and more expensive than in the UK, battery powered LED torches were a luxury.

Solar hot water panels were very common on houses in China, even in poor rural areas, subsidised by the government. Hydroelectric schemes produce more electricity in China than we use in the whole of the United Kingdom.

India has a system of 'feed in tariffs' for renewable energy similar to those of the UK but with more attractive rates.

11a. Other Interesting things I discovered

With my very curious mind I often digressed into areas of research not connected with my own project. I have compiled some of these findings to share with you:

China has over 120 cities with a population of over one million people while the United Kingdom only has 5 cities of a similar size.

The largest restaurant chain in China is "Kentucky Fried Chicken" with over 2000 outlets.

Approximately one fifth of Indian farmland is irrigated by water, mainly from the Himalayas. Over 140,000 miles of irrigation canals were built under the British rule of India. Yet only 20% of India's population has indoor plumbing and over 50% have no access to any kind of toilet.

The high limestone content of land in central Kentucky is the secret to the success of Kentucky's famous horse industry. The calcium carbonate in the limestone contributes to the strong bones of the racehorses.

11b. Unforgettable memories

Visiting a former school in Cambodia, which was one of the sites used by leader Pol Pot to torture and murder over 2 million of his people between 1975 and 1979, was extremely upsetting. But the



captivating personalities of the Cambodian people who lost a third of their population and now have an average age of only 23 was inspiring.

Unfortunately the worst food I experienced on my travels was mutton in China, even though I had deep fried tarantulas in Cambodia and warm camel's milk for breakfast with nomadic camel herders in India!

I met a rice farmer in Cambodia who caught up to 15 kg of rats each night on the paddy fields. He made more money from selling the rats for meat in the local market than from his rice crop.

At the Chinese wet markets it was initially shocking but mesmerising to see the blood on pavements where street vendors killed animals including turtles, ducks, pigeons and frogs. Talk about gate to plate!

The unruly chaos of Indian roads was unbelievable but I did not see an accident.

And many more.....

That's me wearing the red turban!



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I would also like to thank my fellow Scholars who played a huge part in my Nuffield year. Together we pushed the boundaries of our ambitions and travelled to faraway interesting countries. Lifelong friendships have been made.

The following names are not a complete list of everyone who has helped me during my research. I apologise to the helpful people whose names, which should be on this list, but unfortunately I have omitted. I would also like to thank all the people I have met on my travels who without realising it, have added something to my memories, especially all the staff and customers in the many restaurants and butchers' shops who were interrogated by a mutton obsessed foreigner with a Welsh accent.

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