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THE PRODUCTION AND MARKETING OF BEEF

Johnny Butterly

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Nuffield Farming Scholarships Trust

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1 Acknowledgements

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2 EXECUTIVE SUMMARY

2.1 Objectives of my report

* To provide a background to our beef industry in Ireland, and point out the bureaucratic restrictions on the business.
* How Ireland will gain a strong foothold in European markets.
* What production changes we need to achieve this.
* Investigate production methods in other countries.
* Make clear recommendations on new ideas to help our beef industry.

2.2 The Irish beef industry

As will be seen from my report the Irish beef industry is going through a real time of change. We have to mature and adapt to a modern and proper way of doing business which is quite alien to a lot of ordinary Irish beef farmers. This is a challenge that has to be met with conviction The alternative for people who do not accept this challenge will be to go out of business.

In the recent past, with cuts in export refunds every quarter, plus radical changes in supports from Brussels it has been hard to know what way to turn when producing beef. The extra burden that BSE and all its effects has put on the system have been catastrophic. There is a way forward and the industry needs guidance in the right direction once and for all.

In Ireland, breeding and the systems of production need to be improved so as to be able to compete with the best. Output in kilogrammes. per hectare and live weight gain need to be quantified so as producers can clearly see how they are really doing. In the last number of decades output in the beef industry versus for example poultry or pigs has virtually stood still.

2.3 Processing

The Irish processing industry needs to have a long hard look at itself and decide the best way forward. Like other places around the globe, its position as a marketer may not be the way forward into the future. We have seen in the past the problems with too many individuals fighting among themselves for market share.

Objective grading and pricing has to come into play to reward producers with an economic return for what the market demands. With a huge market on the continent to be supplied it is important to identify which part of the market we are aiming for and only supply that market with exactly what it wants.

It is important not to loose sight of the quality end of our own production. It is unique in Europe and is renowned for its flavour. As has been seen in certain continental markets they always come back for more. With the many and varied markets opening up to us in Europe at the moment it is increasingly important to supply a consistent product to the market.

2.4 National herd

The expansion in the herd of the past 10 years halted in 1999 with an overall drop of 3%. Cattle supplies at export plants were up 19%. For the first time ever, over one million steers were slaughtered; up 2%. Heifer slaughterings rose 19% due to newly licensed plants. The decline in steer carcass weights continued, dropping to 335.3kg.

Beef exports in 1999 are up 9% to 554,000 tonnes, maintaining Ireland's position as the largest net exporter of beef in the northern hemisphere. There was a 12% increase in exports to the UK to 95,000 tonnes with an extra 20,000 tonnes sold to continental Europe. It was a record year for Irish exports to the Netherlands, up 30%. International markets bought the same volume as last year, but with the rise in Irish production, their share fell to 54% of the total, back from 58%, in keeping with Bord Bia's strategy to develop European markets.

2.5 Live exports

Live cattle exports increased to 416,000 head with over 80% to European markets, principally Spain. Exports to the Lebanon more than doubled to 75,000 head. The live exports to mainland Europe are set to rise further in the near future which will have the positive effect of keeping competition in the market place.

3 Introduction

3.1 Background

I am a third generation farmer's son working with my wife Rosaleen and four children on our family farm. It is in Co. Louth, just south of the border, in the Republic of Ireland. Our enterprises comprise of beef, some cereals, sugar beet and 30 pedigree Texel ewes. My favourite has always been the beef enterprise. It has changed over the years because of profitability. At present we are running a suckler herd.

I have been working on our farm since 1978. Over these years there have been many changes both in profitability and technology relating to farming. Through research many European countries have developed their various beef breeds to cater for the discerning tastes of a growing affluent society within Europe. With this huge market on our doorstep it is imperative we reap maximum benefit from it. With the significant increase in production levels in recent years it has become clear to me that our huge dependence on third world markets is not sustainable. This has always been a topic which I have been interested in pursuing.

My family's future is very dear to me. The quality of life in a profitable farming situation is hard to beat and I am determined to contribute to the sustainability of the beef industry in any way I can.

3.2 Objectives

The main objective in my study was to properly draw conclusions regarding the production of top quality beef and the targeting of markets which give a good return from a beef enterprise.

There is a need to find a method where the beef industry is encouraged to make a genuine effort to market beef properly into the future. This has been a failing in the industry in the past. It has not necessarily been the fault of the individual processors, but the system in which they found themselves. The rewards from "playing the system" have been great at times which in turn has been a disservice to the industry.

As shown in Table 1 the grades of cattle required for the high priced European markets are not being produced at the moment in Ireland and this is where we need to concentrate our efforts in the immediate future.

Table 1 Steer Classification in 1999 (%)

	E	U	R	O	P	TOTAL
1	0	0	0	0.3	0.6	0.9
2	0	0.1	0.7	1.8	1.3	3.9
3	0	0.9	5.3	9.8	3.0	19.1
4L	0	1.8	12.3	17.4	1.9	33.4
4H	0	2.3	14.0	13.3	0.6	30.3
5	0	0.8	6.6	4.9	0.1	12.4
Total	**0**	**5.9**	**38.9**	**47.5**	**7.6**	**100**

Guide to Table - the Eurogrid is used throughout Europe to grade beef in processing plants. The horizontal line indicates carcass conformation, E being the better and P the poorer. The vertical line indicates fat cover of the carcass, 1 being the measurement for very little fat and 5 being overfat (Source: Department of Agriculture, Food & Rural Development).

The table shows a huge deficiency of top grade cattle in Ireland, the E & U grades which we need in order to improve our standing on the European retail shelves.

4 Background to beef industry structure in Ireland

The beef industry in Ireland is unique in that we have to export nine out of every ten cattle we produce. Historically in the '60's we were exporters of live cattle to the UK, in the '70's and '80's we relied heavily on intervention, and in the '90's we have sold on to third world markets with the aid of export refunds. This has to a large degree spoiled our beef processor's appetite for beef marketing in it's true form. Why employ a big sales team to sell to lots of different customers in Europe when one person can sell the same volume of product to a few buyers in a third world country.

This situation has had two negative effects

It has led to a reduction in the quality of our beef herd because of the absence of any worthwhile premium for quality beef.

It has meant that the meat companies, up until now, have not tapped into the more lucrative European markets as much as they should have to maintain a margin for the producer.

5 Agenda 2000

The new regime which we have embarked on at the beginning of this year is going to put extra pressure on all farming systems including beef. Therefore it is more important than ever that we seek out and gain access to the most profitable markets for our cattle. Under this new regime we will be under tighter constraints and face yet more bureaucracy as we go about our business; this with a view to looking after the environment and supplying the customer with what they want.

6 World Trade Talks

The next round of world trade talks are upon us. I view this as a major opportunity for western Europe to stand up for itself and not be dictated to by other interests around the world. There is no doubt but the rest of the world look on Europe as a premium market, yet they have restricted access. It is their intention to further erode the tariffs to gain more liberal access to these markets. We must resist this by all reasonable means possible. In Europe we have a fully traceable and regulated production system, theirs is not. We do not use growth hormones, they do. With consumers in Europe becoming ever more aware of food safety this is very much in our favour as we commence negotiations.

However being realistic, subsidies and export refunds are not going to last or cannot be sustained for the long term, so it is imperative that we take this chance to secure markets which are real for the future.

In a recent survey of 14 European countries, it has been shown that over 2/3 of European customers believe that meat is necessary for a healthy diet. In the same survey it is shown that beef is eaten in 86% of European households and 77 % of Europeans said they would eat the same amount or more meat in the future. Considering we have an advantage now over our global competition with access to our own markets it is essential we grasp the opportunity of a growing market and make it our own.

7 Raw material for industry

7.1 Changing times

There has been a marked change over the last twenty years in the type of animal for beef production in Ireland. This has been brought about because of the changing markets for which we have been producing.

The beef herd has seen huge changes with a swing from home breeds, for instance, from Hereford X, Shorthorn X and Aberdeen Angus X cows to continental beef breeds which give us what the European customer wants. For the farmer/producer the benefits are also quickly seen.

* Quality dams give better conformation to carcasses.
* Better meat yield.
* Faster growth rate.
* More efficient use of food.

Within the range of continental cows available, there is a marked quality difference which is often overlooked. In the future much more attention will have to be paid to this. At the moment there is a new scheme underway which intends to classify breeding cows on a scored basis thus giving them a breeding value.

7.2 Quality scoring females

While I was in California I visited Hank Stone, who is doing very interesting work in conjunction with U.C. Davis with his replacement heifers. Each beast has a pelvic score taken. By taking this internal measurement, he can determine what size of calf it will be able to deliver. Therefore, he can decide which females to keep in his herd and which bulls to use on them. The bench mark score being used is $200cm^2$. divided by 2.7 at 18 months of age. By continuing to take this score and culling on this basis, his herd has improved greatly. It is my opinion, with the increased demand for heavily muscled cattle on the continent of Europe, this type of scoring would reduce our cull rate and also reduce calf mortality, while at the same time affording us the opportunity to produce what the market requires.

7.3 "BIG" scheme

While in New Zealand I discovered a scheme called "The beef improvement group" or BIG for short. This scheme aims to reward proven beef quality and abolish price averaging. It started in 1996 with funding from the Foundation for Research, Science and Technology to the tune of a quarter of a million NZ dollars.

This group with about 130 farmer members is setting itself up to both improve quality and to have traceability. This is a new way of doing things in New Zealand because of the extensive nature of the beef industry there.

This system involves full traceability which means full recording and identification as we have in Europe. When I visited the farm of Don McKay in the North Island of New Zealand, I helped tag and record details of newly born calves just as I would at home. This shows the commitment to move on and match the European model of recording.

Every farmer involved in the group must give an undertaking to maintain standards of production and husbandry set down by the group. Don, through his involvement in BIG has increased his meat produced per hectare by a staggering 40%, having already been in the top 10% of producers before entering this scheme.

7.3 Female selection

Across the countries I visited, the main points to draw from them is the need to improve the quality of the breeding female for proper beef production. At this stage if you get it wrong, no matter how well everything else is done up the line, one will be struggling against the odds all the way.

* We need to test, monitor and performance score both males and females to get the best from what we have.

* We also need to have a definite knowledge of the market we are aiming for. By knowing this we can make informed choices about what breeds to use.

8 Growing and finishing

8.1 Elimination of store period

The reason I include two stages together is because I contend that they should be one. For too long, in my opinion there has been what is referred to as the store stage of a beef animal's life.

Every farming paper you read in the market report section, you see reference to store cattle prices. I am firmly of the opinion that this is fundamentally wrong. In no other business, that I am aware of is there a "time out" stage where performance is put on hold for that is exactly what the store period is.

It is expensive to grow feed whatever the type, overheads continue to rise, and customers require food that is good to eat! And what do we give them? Having cattle that go through a store period toughens the meat so it is vitally important that animals are on a rising plain of nutrition all of their lives.

By doing this we can achieve the highest growth rates possible at an economic level. An animal that is subjected to a store period or a delay in its growth potential has been proven by trials not to taste as good as an animal that has had a continuous rising plain of nutrition during its life. Once an animal is weaned from its mother it must get a readily available supply of high quality food to maintain growth rate.

While I was in the States I visited feedlots and saw young animals which were bought from cow/calf country and put straight into intensive feeding regimes with great results. This is true of most other systems I saw on my travels.

8.2 Vitamins & trace elements

Work is at present being done feeding high levels of trace minerals and fortifiers along with directly fed microbiological products. Among many other positive effects in growing cattle a high level of vitamin E improves shelf life considerably. For Irish feeders this is an obvious tool to use as our produce has to travel a considerable distance to get to market. Competing with home produced beef on continental markets means that what we supply on the beef side needs to be as good if not better than what we are competing with. Because we are such a large exporter of cattle and beef rather than being a producer of commodities we need to tap into as many niche markets as we can. This is where we will get bonuses and if we are to survive in the industry, this is what we need to do.

9 Processing

9.1 Structure

Table 2 Stock and Flow of Cattle

	1993	1994	1995	1996	1997	1998	1999
Cattle Census (December) ('000 head)	6308	6410	6532	6757	6992	7093	6708
Slaughterings at export approved Abattoirs ('000 head)	1419	1272	1362	1509	1648	1764	1997
Other Abattoirs ('000s head)	190	180	200	150	160	135	124
Live Exports ('000s head)	379	404	372	190	59	171	416
Of which: EU	148	129	114	51	50	142	343
Of which: 3rd Countries	231	275	258	139	9	29	73
Total Disposals ('000s head)	**1988**	**1856**	**1934**	**1849**	**1867**	**2070**	**2537**

Source: CSO

The processing side of the beef industry in Ireland has been the source of great debate in the recent past. It has been claimed by processors that it returns very low margins.

The recent report "Irish beef processing" by Mr. Peter Bacon and associates contends that net operating surplus in the industry is about 2% of turnover. From this, they say, the industry must service its borrowings before generating a return for investment.

The processing industry is mainly made up of privately owned companies, which sell beef to various markets around the world. There are three major players in our industry, they are Dawn, AIBP, and Kepak. There are also several other important single plant processors, which kill a significant number as well. The top three have approximately 60% of the national kill, with the top eleven accounting for over 90% between them.

9.2 Mechanical grading

Over the last number of years an aspect of beef production which has really been a bone of contention between farmers and processors is the grading of carcasses, especially when the grade received affects the price returned to the farmer. The following is a brief summary and findings of revolutionary trials undertaken by our Dept. of Agriculture at Dawn Meats Midleton, Co. Cork.

Three beef carcass classification systems that use Video Image Analysis (VIA) technology were tested in two trials. The systems were BCC2, manufactured by SFK Technology, Denmark. VBS2000, manufactured by E+V, Germany, and VIAscan, manufactured by Meat and Livestock Australia. The first trial, conducted over a 6 week period in July/August 1999, involved calibrating the systems on a sample of carcasses representative of the Irish slaughter population then validating these on a further sample obtained at the same time. The second trial, conducted in the first two weeks on March 2000, was a further validation trial on an unrelated sample.

The reference for the calibration and validation exercises were determined by a panel of three experienced classifiers using the EUROP grid with subclasses for confirmation class and fat class (15 classes for each). In the first trial the accuracy of the systems at predicting saleable meat yield in a sample of steer carcasses was also assessed.

In the first trial, after calibration, the systems predicted the scores of the reference panel for the validation set to within 1 subclass for 92.8%, 91.0% and 96.5% of the carcasses for conformation and for 80.4%, 72.0% and 74.6% of the carcasses for fat class, for BCC2, VIAscan and VBS2000 respectively. The performance of all three systems was clearly superior for the prediction of reference conformation class than for the prediction of reference fat class. There were some biases (systematic over-or under-scoring) either overall or within certain classes for conformation class and fat class predictions. There was also variations in the accuracy within classes for all three systems for conformation class and fat class predictions. Saleable meat yield was predicted with a similar high accuracy (rsd (relative system difference) = 1.1-1.2%) by all three systems.

Several conclusions can be drawn from these trials which were the first comparative trials in the world of any VIA beef carcass classification systems and the first time that any of the systems had been tested on Irish carcasses.

- Firstly, the differences in accuracy between the systems were relatively small, with a range in the second trial of about 3% for conformation class and about 5% for fat class.

- Secondly, the accuracy for conformation class was much higher than for fat class for all systems, which is in agreement with published results from trials of individual systems.

- Thirdly, even after the recalibration exercise there were some important biases that would be of concern to the industry. Finally, all systems were able to predict saleable meat yield with a similar high accuracy (rsd's of slightly over 1%)

The EU Beef Management Committee was recently presented with draft proposals for the authorisation of mechanical beef carcass classification systems. Based on the results from these two trials it is unlikely that any of the three systems that were evaluated would pass the proposed authorisation criteria. If the biases that were evident in the results could be reduced then it is possible that one or all of the three systems could pass the proposed criteria for conformation class. However, based on these results, none of them would be likely to pass even the first subclass of the reference panel. One possible option would be to seek to have the proposed state of the technology so that one or more of the systems would be likely to be authorised. At present there is no other technology that would be likely to meet the proposed criteria for authorisation. The only other possibility would be to use the systems in the interim and to base a payment structure on their predictions of the EUROP classification scale or of meat yield, though visual classification would still be required for EU price reporting and market support purposes.

10 Marketing

10.1 California

In the US they have a number of smart marketing incentives which they are pursuing. They have a three pronged marketing promotion involving the California Beef Council, Railys Supermarket chain and a radio station. Between them, they promote discounted cuts in conjunction with radio show competitions and holiday prizes. This is working very well and raising the awareness of beef, thus helping to sell more.

The CBC have identified that 30% of the population is Hispanic. They traditionally eat quite a lot of beef. They have their own way of purchasing beef and cooking it, so this is regarded as a niche market and is being actively targeted. Their family structure has remained mostly with the mother staying at home and being able to cook more conventional/ traditional meals.

Due to modern day living many households have both adults working and according to studies undertaken they expect to be able to prepare a meal within 12 minutes of arriving home from work. With this in mind many companies e.g. Harris Ranch and Brunett and Sons are taking certain cuts of beef and pre-cooking them so that they can be ready to serve within 8 - 12 minutes of starting meal preparation.

This is a major development that will help to keep beef as a realistic option on family menus. With this trend a lot of people call to a store on their way home from work to purchase their meal.

The Beef Council have addressed this trend by running advertisement campaigns at strategic times of the day to put beef firmly in peoples minds so when they go to the store they will think of it and consider it an option.

Airline meals have been identified as a growing market and worthy of attention, for instance the Boeing Airline company serve approximately 20,000 meals per day. It is safe to say a percentage of this market would be a worthwhile gain to the industry.

As can be seen from these marketing examples in the USA, promotion and aggressive marketing has a huge role to play and this is how we must approach the European market in the future.

It has always been said that the US sets standards and trends for the western world. They have a well organised way of approaching their beef business. The only saving grace for us is that in California alone they have 32 million people to feed, which is 13 % of the US population.

10.2 Australia

While I was in Australia I saw ideas on marketing which are working for them. The Woolworths chain of supermarkets is working with producers to procure their requirements of beef.

They are recording everything the producer does in husbandry on the farm and they are using this as a means of traceability for themselves with the customer. When I questioned supermarket buyers on the issue of bonus schemes for producers on price, they said this was a minimum they required to accept animals rather than it being a bonus scheme. I saw little extra benefit for the producer in this scheme other than he had a customer for his livestock.

The Safeway supermarket chain are doing something similar by getting involved with producers and organising their kill requirements and matching that with the type of animal they need. They are inclined to have a number of larger feed lot owners whom they give preferential treatment to and use as a safety valve for themselves when supplies are tight.

A common practice in the processing industry in Australia is contract killing where the abattoir gets paid a set price for doing a job and the organisation that owns the meat markets it themselves. This practice could be a way forward here in Ireland to allow new people to target niche markets and utilise more fully the excess slaughtering capacity at present in the industry.

10.3 Italy

When I was in Italy most feedlots I visited bought their cattle from surrounding countries. A lot of the better quality cattle came from France. The people who buy these cattle have a good relationship built up with the producers and they are bought in graded groups. When they go to purchase they can see the various standards of cattle and pick from that and pay accordingly.

In the past few years there has been a growing market for top quality Irish weanlings developing in Italy. One feed lot owner named Gian Franco Vandelli said that he was buying some cattle from Ireland but the quality was not nearly as good as French cattle. He said that Irish cattle become much too fat and kill out is 50-55% whereas French cattle kill out at 60%. On grading the Irish cattle grade mostly Rs and Os where the French grade all Es and Us. The reason he buys Irish cattle is because they are cheaper.

There is definitely a future in this market for Ireland, but producers need to improve consistency and quality a lot. The use of cows with dairy influence for producing their type of cattle will not work. We need to use the best of only a few beef breeds as a terminal sire to cater for this market.

I suggest that Charolais, Limousin and Belgian Blue are the breeds realistically capable of producing the right article and at that only the well muscled ones. The newly imported Culard Charolais, from what I have seen, would also do the job well.

In a country where live imports dominate, all the major Continental beef breeds are to be found. As in other European countries, there is a preference for beef produced from local breeds, e.g. Piedmontese, which is able to command a premium over the mainstream breeds. In a market so large and diverse, there are also regional preferences for different continental breeds which can result in a premium being paid.

10.3.1 Cattle type

Young bulls constitute almost 60% of total adult cattle slaughterings. Steer production is minimal. The remainder of adult slaughterings is almost evenly divided between heifers and cows. Cow beef is predominantly exported, or used for further processing, as domestic consumption of cow beef is almost non-existent except in regions like Rome and Bari.

Young bulls are typically slaughtered at 18-20 months of age, with carcass weight in the range 380-440 kg, while heifers are slaughtered lighter and younger. Domestic heifers are generally in the range 260-320 kg carcass with a fat score of 2-3. Heifer beef imported from Ireland can weigh up to 340-350 kg, and because of its better eating quality, fat score can extend to 4L. Sources consulted in the course of this study proffered the view that consumer preference is shifting towards heifer beef, on the basis of its superior eating quality.

10.3.2 Meat colour

In general, Italian meat colour is lighter due to the younger age of slaughter and intensive meal feeding. Because of this predominance of paler beef, consumer tastes have been fashioned accordingly, bringing about a general preference for lighter colour.

10.3.3 Fat

In a market dominated by young bull beef, carcass fat levels are much lower than those found in Ireland. The trend towards better eating quality, however is having the effect of more tolerance of fat cover as a result. In areas where there is significant demand for heifer beef like Emilia Romagna, there is also a tolerance for fat score 4L on heavier heifers.

Consumer preference is predominantly for white coloured fat, which is a natural result of the Italian feedlot system.

10.3.4 Quality assurance

Quality farm assurance is not as well developed as in Ireland and Britain. There is as yet no effective national or institutional quality scheme. This whole area has been pioneered in Italy by the retailer, and quality assurance is an essential requirement for Irish suppliers to this sector.

Table 3 Italian Cattle Slaughterings ('000head)

	1996	1997
Veal Calves	1229	1131
Young bulls/Heifers*	2626	2644
Cows	677	763
Others	97	65
Total	4629	4603

*Young bulls approximately 2 million head

10.4. Irish beef in Italy

Retailers increasingly recognise Irish beef as being the superior eating quality beef on the market. They see this as meeting an increasing demand on the part of consumers for better eating quality as opposed to the traditional emphasis on the colour.

Traditionally Irish plants supply mainly quality assured heifer beef, plus some quality assured steer, young bull and recently cow beef to Italy. New initiatives are being undertaken to supply more suitable product to the Italian market. Cereal finishing of heifers, steers and young bulls is now being undertaken on a planned basis by several groups in Ireland. These initiatives can only lead to improved prices for Irish product.

Table 4 Market Requirements for Italy

Category	Car.Wt (kg)	Classification	Colour	Remarks
Steer/Heifer	280-380	UR 2/3/4	Pink White fat	Some fat cover Cereal finish
Young Bull	360-420	EUR 2/3	Pink White fat	Light fat Cereal finish

The proportion of product supplied in boneless form has been increasing and now accounts for over half of all product supplied. Indeed this is one of the big advantages of Irish suppliers to be able to supply cuts in volume.

Requirements for fat cover vary. In some regions, customers of Irish beef will require fat up to Grade 4L, while in other regions the requirement is for leaner grading carcasses.

Irish exporters have to select very rigorously for this market, to meet the above requirements. However, customers report that Ireland's capability in this regard has improved steadily in recent years. This is a consequence of the increased supplies of cattle from the suckler herd.

10.5 Testing the product

Producing beef for the high priced Italian market has considerable costs, they require pink coloured muscle with white fat, the muscle has to have slight marbling but not visible to the eye. To achieve this requirement, the diet for these cattle needs to be totally different than what we are used to feeding. The diet must contain 14-15% protein content and starch levels of 18-22% per kilo of dry matter to get this type of meat.

While I was in Italy I visited Padova University near Venice where professor Igino Andrighetto has been working in cooperation with Co-op Italia for the last 10 years on meat quality. This work has been done in conjunction with cattle feeders. They have been getting advice on levels of ingredients to include in their rations to get the required results.

The Professor says everyone in the industry talks about quality, but they in the University are the only ones that measure it. They do this by testing for:

* Taste by cooking.
* Marbling by sight.
* Fat content and color.
* Tenderness.
* Water loss in cooking.
* Shrinkage.

They undertake these tests in the laboratory. They also use consumer panels to blind taste beef fed on different rations. He contends that beef must have some fat for taste but must not be too visible as it puts off the buyer. By doing all these tests on their product they can select the most popular and inform the producer of what to aim for.

As the result of exhaustive trials Co-op Italia prefer to use mostly French beef breed females for their requirements. They find they grow very quickly and they have the right colour at slaughter at 16-17 months of age. Trials completed on young dairy bred bulls, even though they were slaughtered at a younger age than the females, produced beef that was too red for their market.

Another element of production that effects quality of meat is the density at which cattle are housed while being fed for slaughter and while being transported to the processing plant.

This all relates to stress management. The less stress an animal is subjected to the better the beef tastes. They have concluded that animals should not be in transportation for more than two hours prior to slaughter.

After talking to many cattle farmers, processors, and supermarket buyers in Italy I concluded they are very conscious of meat quality and how to get it. They are totally in touch and know what they want. If we as a cattle producing country are going to supply this market in the long term with either weanlings or beef we need to deliver what they require consistently and on time otherwise we will not succeed.

10.6 Spain

Spain has suddenly emerged from relatively modest beginnings into a specialist beef finishing country which has taken 190,000 feeding animals from the Republic of Ireland in 1999 alone, compared with 87,000 head in 1998 and just 15,000 in 1997.

Market analysts believe the encouraging returns enjoyed by an increasing number of beef feeding specialists in Spain confirm the expanding economy and rising beef consumption. The simplicity and economic effectiveness of their new style of operation is based on taking suitable cattle from the grass based suckler breeding herds of Northern Europe and feeding them intensively on cheap locally grown vegetable protein and cereals, often in the shape of fresh food factory trimmings and other raw waste matter.

On a recent visit to Spain I saw at first hand some of these feedlots. Freshly bought in.

cattle are given an introductory ration of dried milled alfalfa hay and concentrates. After a short period they are switched to an all concentrate diet with a small amount of straw for roughage.

From what I saw there has been little investment in buildings in recent years, therefore overheads are low. Their geographical position with a good climate and the availability of reasonably priced foodstuffs gives them an edge on which they can capitalise. Spanish feedlot operators are already claiming that Spain could soon become the Texas of the EU.

10.7 Bord Bia

The promotional arm of the Irish beef industry is An Bord Bia (The Irish Food Board). Their function is to promote Irish food products including beef on all markets where we have a presence and also to seek out other marketing possibilities. They also assist any company that needs help in accessing a market where they see potential. They do this by advertising campaigns and attending all the big food fairs across Europe and beyond.

They use show biz personalities where they can have a positive impact on the consumer, for example Ronan Keating of the Irish pop group Boyzone, Catriona McKiernan the Irish World marathon champion and the internationally famous chef Keith Floyd.

Recently Bord Bia launched a new push for beef in France and England. In 1995, over half of the Irish beef exported to Britain and France, our largest European markets, ended up on supermarket shelves. Last year, that figure was just 16% in the UK and 10% in France.

This happened as part of the fall-out from the BSE crisis of 1996. French and British retailers adopted a nationalistic stance, and have been labeling and promoting domestic beef on their shelves. This is a problem for the Irish beef industry because although we have maintained the volume of exports to these markets, the returns from wholesale or catering are not as good as those available in retail.

Country of origin labeling, which becomes compulsory in 2002, has been a reality in these markets for the past two years. Bord Bia has been working to ensure that Ireland can win back these valuable retail markets which would be in effect new business for Irish beef.

Extensive consumer research has been carried out across Europe which has found that consumers have a positive image of Irish beef. They still say that they prefer to buy home grown beef, however, in areas in Italy where advertising campaigns for Irish beef have been run over the past three years, this resistance has broken down.

To capitalise on this positive image, Bord Bia is introducing 'Irish Beef' labels for packs of beef on supermarket shelves, supported by promotions and advertising. This began in Britain in autumn 1999. This is different from straightforward country of origin labelling as the logo will be used to promote and build consumer loyalty with the product.

The success of this project in our most important markets will cost a substantial amount of money. The costs of advertising in newspapers, posters and so on are extremely high. However, the prize is winning new retail accounts for Irish beef in these markets for the future.

Historically Bord Bia has only been given a promotional role. I contend that it could be of increased benefit to the industry if the government gradually changed its focus from promotion to also include a marketing role. We need only to look at Bord Bainne, the Irish

Milk Board, to see the huge strides they have taken on behalf of the dairy industry. With the present urgent need to secure strategic markets, I think their role should be enhanced.

10.8 Irish Keenan/Kepak Beef Club

The Keenan/Kepak Beef Club is an initiative to provide a long-term stable and profitable beef price for farmers by supplying cattle of specific quality to high priced Mediterranean markets.

This initiative is the result of the Kepak Beef processing group and the Keenan Diet feeder group coming together in an effort to put some struggle into niche marketing of beef to Italy.

It is based on a feeding regime which yields high levels of growth with the desired pink muscle and white fat required to supply the Italian market. It is a highly commendable project and may well point the way forward for some producers into the future. The aim is to supply 20,000 cattle this year. In my opinion they need to integrate more fully and link up with a strong retail group to forge their presence in this market.

11 Conclusion

* The beef industry in Ireland has to target specific markets and cater for their needs with consistency and reliability.

* We need to realise that there are many markets at home and in Europe that we can supply. The fact that we have to export almost nine out of every ten animals produced means we have to capture every niche market we can find.

* If possible we as an exporting nation must get away from producing a commodity and instead be producers of quality food that our customers can easily identify and enjoy; thus they come back for more.

* The mistrust that is so prevalent in the industry must be overcome so as everyone can move forward to a better future. Farm practice in production must be at a level not seen before to maintain consumer confidence because without this our industry has no way forward.

* I believe there are many positives and much renewed confidence in the beef industry at present. With an increase in demand from deficit countries we have the best opportunity in recent time to make this beef industry work.

* We need to embrace technology both at production level, for example, ration formulation and animal performance levels and in marketing to gain advantage over our competitors.

* It is vital that demand for live exports and carcass beef remains so as to have real competition for the producer to get maximum profit.

12 Recommendations on new ways to go forward

* Undertake a proper breeding programme which would involve internal pelvic measuring of heifers for breeding to improve our national herd.

* Recommend that groups like the Keenan/Kepak club align themselves with a strong retail chain rather than sell on the open market.

* Encourage companies to get involved in pre-cooking of beef so as to add value and take advantage of growing consumer trends such as microwave dinners.

* Recommend that all sides in the industry integrate more to streamline the production and marketing of beef.

* Raise awareness of correct levels of minerals and vitamins that should be fed to beef cattle, for performance and also to enhance the shelf life of beef in supermarkets.

* Lobby at the highest levels politically to change Bord Bia's role from solely promotional to include marketing.

* Set up producer groups to assist in improving margins being obtained from beef production.

Appendices

Appendix 1 Abbreviations

BSE	Bovine Spongiform Encephalitis
AIBP	Anglo Irish Beef Processors
IFA	Irish Farmer's Association
FBD	FBD Trust
UC Davis	University of California at Davis.
CBC	California Beef Council

Appendix 2 People I met while on tour

California Beef Council	Bruce Bervin
UC Davis	Jim Oltjen
Yolo Land Co.	Hank Stone
Harris Ranch	John Isadore
"BIG" scheme NZ	Bob Thomson
Whakapirau Station	Don& Jackie McKay
Five Star Beef	Gus Crawford - Trevor Johnson
Westmeat NZ	Phil Welsh
Australian Feedlotters Association	Rob Sewell
Dollarvale Gourmet Meats	John Martin
Hells Gate Station	Gordan Patterson
Aranoui Feedlot	Dougal Cameron
Co-op Italia	Reggio Emillia
Modena Feedlot	Gian Franco Vandelli
University of Padova	Professor L. Andrighetto

Appendix 3 Bibliography

University of California Davis & California Beef Council	
Carcass and Meat Quality in Bovine Cattle	Professor L Andrighetto
Irish Beef Processing	Peter Bacon & Associates
Objective Beef Carcass Classification	Paul Allen & Nicholas Finnerty
Agenda 2000 - Implications For cattle systems	Bernard Smyth & Liam Fitzgerald

Appendix 4 List of tables

As well as bestowing its own awards

NUFFIELD FARMING SCHOLARSHIPS TRUST

has been chosen by the following bodies

to administer their awards

ALAN & ANNE BECKETT

THE BEMB (R & E) TRUST

THE BRITISH POTATO COUNCIL AWARD

DARTINGTON CATTLE BREEDING CENTRE

FRANK ARDEN MEMORIAL AWARD

THE GLOBALFARMERS.COM AWARD

THE JOHN OLDACRE FOUNDATION

THE LINCOLNSHIRE AGRICULTURAL SOCIETY

THE LSA CHARITABLE TRUST

THE PROFESSOR MAC COOPER NEWCASTLE UNIVERSITY

MARKS & SPENCER

THE NORTHERN IRELAND (JIMMY YOUNG) AWARD

THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND

THE ROYAL NORFOLK AGRICULTURAL ASSOCIATION

THE SOUTH OF ENGLAND AGRICULTURAL SOCIETY

THE STUDLEY COLLEGE TRUST

THE TREHANE TRUST

THE YORKSHIRE AGRICULTURAL SOCIETY