

# **Expenditure Review of the Beef Carcase Classification Scheme**



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AGRICULTURE & FOOD  
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# **TABLE OF CONTENTS**

	Executive Summary	4
Chapter 1.	Introduction	8
Chapter 2.	History of Beef Carcase Classification in Ireland	10
Chapter 3.	Detailed Description of Beef Carcase Classification	11
Chapter 4.	Supervision/Control of the Beef Carcase Classification Scheme	15
Chapter 5.	Inputs	17
Chapter 6.	Outputs	20
Chapter 7.	Impacts	22
Chapter 8.	Compatibility of the Objectives of Beef Carcase Classification with the Statement of Strategy '03-'05	25
Chapter 9.	Staffing Mechanisms in other Member States	26
Chapter 10.	EU Control Committee and Standards Panel Findings, Appeals to the Office of the Ombudsman	28
Chapter 11.	Introduction of New Technology	30
Chapter 12.	Conclusions	35
Chapter 13.	Recommendations	39

Annex 1	Terms of Reference	41
Annex 2	Cattle and Beef Industry in Ireland	47
Annex 3	Role of Agriculture and the Food Industry in the Irish economy	52
Annex 4	Irish Beef Exports 1998 – 2003	53
Annex 5	Beef Carcase Classification Staffing Structure	55
Annex 6	Description of Sex Categories	57
Annex 7	Description of Conformation Classes	58
Annex 8	Description of Fat Classes	59
Annex 9	Carcase Dressing Specifications	60
Annex 10	Staff Costs	61
Annex 11	Classification Results	62
Annex 12	EU Weekly Price Report	64
Annex 13	Weekly Industry Price Report	65
Annex 14	Carcase Classification Results 1998 to 2002	66
Annex 15	Price Differentials (cent/kg) 2001 and 2002	69

## **EXECUTIVE SUMMARY**

### **1. Context**

The Expenditure Review process began in 1997 and forms part of the Financial Reform agenda set out in Delivering Better Government.

A central aim of the Expenditure Review process is to improve the efficiency and effectiveness of expenditure by systematically analysing what is being achieved by each programme so that more informed decisions can be made on the allocation of resources and the prioritisation of work programmes.

### **2. Objective of the Beef Carcase Classification Expenditure Review**

The objective of the Expenditure Review of the Beef Carcase Classification Scheme (BCC) is to analyse in a systematic manner what is being achieved by Exchequer spending on the scheme and to provide a basis on which more informed decisions can be made concerning its future operation.

The review should in particular answer three questions:

- (1) Why do we provide a beef carcase classification service ?
- (2) Has this service been provided in an efficient and effective manner?
- (3) Should the Department of Agriculture and Food continue to provide this service?

### **3. Background**

Agriculture is of primary importance to the Irish economy. In employment terms some 108,000 are employed in the primary agriculture economy, with a further 52,000 employed in the food, drinks and tobacco sector, bringing the total to 160,000 or 9.5% of total national employment. Total value at producer prices amounted to €4.7 billion, or 3% of GDP in 2002. Beef production forms a significant part of this output, with a total value of €1.3 billion in 2003.

#### **4. History of Beef Carcase Classification in Ireland**

A national beef carcase classification scheme was introduced in Ireland in August 1979 to facilitate improvement in the quality of beef being produced and thereby facilitate the industry in developing export markets. This was superseded by a mandatory EU-wide scheme in 1982.

#### **5. Objective of the Beef Carcase Classification Scheme**

The main objective of the EU Beef Carcase Classification Scheme is to provide a common basis for describing adult bovine carcasses in all Member States, for price reporting purposes and to enable the operation of Intervention and other beef support schemes. In addition, classification provides a basis for the payment of premia for better quality carcasses encouraging the breeding and production of better quality animals.

#### **6. Staffing and Supervision/Control of Beef Carcase Classification**

The BCC group is presently comprised of a total of sixty-five staff. All classification in Ireland is carried out by Department of Agriculture and Food staff. A national Standards Panel carries out unannounced twice-quarterly checks at each slaughter plant to ensure that the regulatory requirements are being complied with.

In addition an EU Control Committee visits each Member State regularly to ensure that regulations are fully implemented and that classification standards are evenly applied throughout the Community.

#### **7. Financial Inputs**

Total direct costs for classification operations is approximately €4.7 million per annum. This is comprised of salaries, travel and subsistence allowances and overtime payments. A lesser-cost area is the provision of equipment e.g. classification labels, protective clothing etc.

## **8. Introduction of New Technology**

Carcase classification as it has operated to date has been reliant on human judgement. Consequently, regardless of the quality of the controls that are implemented, in an era of widespread use of modern technology, the operation of a subjective system of this nature is likely to be questioned. The possibility of using mechanical means for classification has been researched since the mid '80's and the European Commission have been actively involved in the discussion since the late '90's. Ireland, in pursuit of the introduction of automated classification, carried out two substantial trials in 1999 and 2000. A regulation setting down the manner in which an authorisation test should be carried out and the minimum requirements for approval was agreed in mid 2003. An authorisation test was conducted in Ireland in late 2003. All three machines tested comfortably met the requirements and have now been licensed for use by the Irish beef slaughtering industry.

## **9. Outputs**

The main output relates to the classification of carcasses. In the order of 1.6 million carcasses are classified each year. Other outputs include the analysis and publication of classification results, collation and publication of slaughter statistics and price reporting.

## **10. Impacts**

Since its introduction, beef carcass classification has enabled the prices paid to beef producers in all Member States to be reported in a standardised manner. When marketing difficulties arose, it facilitated market support schemes such as Intervention, the Purchase for Destruction Scheme and Special Purchase Scheme. Under the Agenda 2000 reforms, Private Storage Aid is the favoured support method for beef, should the need arise in the future.

## **11. Conclusions**

Ireland is almost unique among EU Member States in employing Department staff to carry out classification duties and in comparison with our nearest neighbours, operating costs are relatively high. Automated classification systems are now available.

## 12. **Recommendations**

The Department should actively encourage slaughter plants to move to automated classification. All Department staff presently assigned to classification duties should be transferred to other work areas within the Department, with any remaining manual classification done by licensed plant employees.

Performance indicators should then be updated to include criteria such as the number of machines installed, percentage of kill classified by machine and progressive accuracy of machine classification.

## **Chapter 1 – Introduction**

### **Expenditure Review Process**

- 1.1* The Expenditure Review process that began in 1997 forms part of the Financial Reform agenda set out in Delivering Better Government. One of the aims of Delivering Better Government was to put in place a process of modern business planning across the Civil Service, based on better informed resource allocation decisions and enhanced accountability for the results achieved for these resources.
- 1.2* A central aim of the Expenditure Review process is to improve the efficiency and effectiveness of expenditure by systematically analysing what is being achieved by each programme and providing better information on which more informed decisions can be made on the allocation of resources and the prioritisation of work programmes.

### **Importance of agriculture and cattle/beef production in particular to Ireland.**

- 1.3* In employment terms, agriculture remains very significant, as in 2003 over 108,000 were employed in primary agriculture and a further 51,600 in the food, drinks and tobacco sector.

Primary agriculture remains more important to Ireland than most other EU Member States, with primary agriculture accounting for 3% of GDP in 2002 and the agri-food sector as a whole accounting for 8.4% of GDP.

With regard to exports, agriculture is significant, with agri-food exports in 2002 valued at almost €6.7 billion i.e. 7.1% of total exports. Primary agricultural exports amounted to €3.6 billion, of which beef exports contribute €1.2 billion.

Further detail is given at Annex 2.

### **Beef Carcase Classification Expenditure Review**

- 1.4* The purpose of the Expenditure Review of the Beef Carcase Classification Scheme (BCC) is to analyse in a systematic manner what is being achieved by Exchequer spending on the scheme and to provide a basis on which more informed decisions can be made concerning the running of the scheme in the future. This review forms part of the Government Expenditure Review Process for the period 2002 – 2004.

1.5 The Terms of Reference of the Review were drawn up by the Department and, as required by the Expenditure Reviews Process, were submitted and approved by the Department of Finance.

### **Terms of Reference**

1.6 **The full Terms of Reference of the Expenditure Review are set out at Annex 1. In summary, the aims of the Review are:**

- Examination of the objectives of the scheme;
- Examination of the current validity of these objectives and their compatibility with the Department's Statement of Strategy 2003 – 2005;
- Examination of the extent to which these objectives have been achieved, commenting on the effectiveness of their achievement;
- Examination of costs and staffing resources including a review of the efficiency with which the Department has achieved its objectives;
- Identification of the outputs and impacts accruing from the BCC scheme and the trend of these outputs/impacts;
- Provide quantifiable and measurable performance indicators to assess progress;
  - Number of staff employed 2003
  - Number of factories serviced
  - Number of carcasses classified annually
  - Trends in carcass quality over time
  - Financial inputs

1.7 The Review was carried out by Mr Pat Johnstone, Assistant Principal, Beef Policy Division and Mr Jim Carew, Agricultural Inspector.

## **Chapter 2 - History of Beef Carcase Classification in Ireland**

### **National Scheme**

- 2.1 A national beef carcase classification scheme was introduced in Ireland in August 1979. This was based on a seven-point scale for conformation, using the letters I,R,E,L,A,N,D and for fat the numbers 1 to 7 to denote the various qualities. Its basic aim was to provide a common classification standard for all sectors involved in the beef production chain. It was considered that its introduction would facilitate an improvement in the quality of cattle being produced, thereby assisting the industry in the development of export markets. National schemes were also introduced in some other EU Member States.

### **EU Scheme**

- 2.2 Further to Council Regulations 1358/80, 1208/81, 1202/82, and Commission Regulations 2930/81, 563/82 and 1557/82 the national scheme was superseded by a standard European-wide classification system on October 1<sup>st</sup> 1982. The Council regulations set down the five Sex Categories Y, B, S, C, and H (later revised to A, B, C, D, E), a five point scale for Conformation (EUROP), and a Fat scale of 1 to 5.
- 2.3 Commission Regulation 2930/81 provided a detailed description of the Conformation and Fat classes. A series of Council and Commission regulations followed that included carcase labelling requirements, a requirement to return classification details to the producer, controls of classification required within each Member State, the manner of operation and composition of the EU Carcase Classification Control Committee, etc. Statutory Instrument No. 8 of 1994 gave full effect to these regulations and also set down detailed mandatory requirements in relation to the operation of classification at slaughter plant level in Ireland.

## **Chapter 3 - Detailed Description of Beef Carcase Classification**

### **Objective of the beef carcase classification scheme**

- 3.1 The main objective of the EU Beef Carcase Classification Scheme is to provide a common basis for describing adult bovine carcasses in all Member States, for price reporting purposes and to enable the operation of Intervention and other beef support schemes. By identifying the various qualities of carcasses, classification provides a basis for the payment of premia for better quality carcasses and accordingly, should encourage the breeding and production of better quality animals.

### **Requirement To Classify**

- 3.2 Commission Regulation (EEC) No 344/91 Article 2 (2) states that classification is compulsory for all plants that slaughter more than 75 adult bovine animals per week as an annual average. In addition Commission Regulation (EC) No 295/96 Article 2 (1) requires the operator of any slaughterhouse which annually slaughters more than 20,000 adult bovines to report prices.
- 3.3 Commission Regulation (EEC) No 344/91 Article 3 as amended by Regulation No. 1993/95, requires that “...*classification be carried out by qualified technicians who have been licensed for this purpose. The licence may be replaced by an approval granted by the Member State where such approval corresponds to recognition of a qualification*”.

### **Staffing Structure Of Beef Carcase Classification**

- 3.4 The BCC group is presently comprised of a total of sixty-five staff, which includes four at management and five at local supervisory level, with the remainder being at classification officer level. Full details of the staffing structure within BCC are set out at Annex 5.
- 3.5 All classification in Ireland is carried out by Classification Officers, who are officials of the Department of Agriculture and Food. Classification Officers belong to a

supervisory grade and their appointment as Classification Officers is subject to completion of a minimum period at the basic grade of Technical Agricultural Officer, success at a competitive interview, a three-month training programme and reaching a satisfactory level of expertise in beef carcass classification.

### **Training Programme For Classification Officers**

- 3.6 The training programme consists of twelve weeks of full-time training. Tuition is given by senior supervisory staff of the Department. Each trainee is confined to examination of cold carcasses in the chill room for the first six-week period. Subject to passing a proficiency test, the trainee then proceeds to assess hot carcasses. At the end of the second six-week period, a proficiency test on both cold and hot carcasses is completed. If deemed to be competent, the trainee is certified to commence on-line classification, initially under the close monitoring of the local supervisor. Accordingly, prior to being approved for classification duties, each officer will have undergone two modules of training, each of six weeks duration and will have successfully completed an examination at the end of each module.

### **Classification Criteria**

- 3.7 The system describes three carcass characteristics: Sex, Conformation and Fatness. There are five sex categories, which are identified by the codes: A, B, C, D and E. These are described in Annex 6.
- 3.8 The conformation class describes the development of carcass profiles, in particular the essential parts - round, back and shoulder. It is assessed by visual appraisal. Five conformation classes are defined, represented by the letters E, U, R, O, and P. The letters represent an incremental scale ranging from 'P', which denotes 'worst' conformation, upwards to 'E' representing 'best' conformation. EU regulations allow for up to 3 subdivisions of each conformation and fat class. In Ireland conformation class P is subdivided into three subdivisions represented by P+, P and P-, describing declining conformation. There is no uniformity with regard to subdivision of classes across Europe. France, Netherlands, Denmark and Sweden subdivide each of the five conformation classes into three subclasses, while Italy, Spain and Germany have no subdivisions. The UK and Finland are intermediate with the former subdividing U, O and P into two subclasses and the latter subdividing R, O and P into three. There is a

conformation class ‘S’ for carcasses better than ‘E’ conformation. Its use is authorised in some Member States, but it is not used in Ireland. Conformation classes used in Ireland are described in Annex 7.

3.9 The fat class describes the amount of fat on the outside of the carcase and in the thoracic cavity. It is determined by visual appraisal. Five fat classes are defined, represented by the numbers 1, 2, 3, 4, 5. This incremental scale ranges from ‘1’, which denotes least fat, to ‘5’ denoting most fat. In Ireland Fat class 4 is subdivided into low fat (4L) and high fat (4H). Again similar to conformation there is no uniformity in the subdivision of fat with Netherlands and Sweden having a fifteen point scale. France, Denmark, Italy, Spain and Germany have no subdivision and the UK subdivides fat classes 4 and 5 into two. Fat classes used in Ireland are described in Annex 8.

### **The Classification Grid**

3.10 Conformation and fatness are assessed independently, and in Ireland all carcasses must fall into one of the subclasses in the 7 X 6 grid:

#### Conformation Class

	E	U	R	O	P+	P	P-
1							
2							
3							
4L							
4H							
5							

### **Carcase Dressing Specification**

3.11 The EU carcase dressing specification sets down a standardised method of presenting the carcase after bleeding, skinning and evisceration. It identifies those parts of the carcase that remain and those that are removed prior to weighing. The carcase dressing specification is described in Annex 9.

3.12 Under the Regulations, carcasses must be weighed to at least the nearest 0.5 kg within one hour of slaughter, having been dressed in accordance with a standardised dressing specification. Payment is based on this 'hot' weight less 2%, to allow for loss of weight on chilling.

### **Classification Procedures**

3.13 Each carcase is visually assessed and classified at the weighing point on the slaughterline. All classification data are recorded by a plant operative on the Daily Classification Sheet and this information is also affixed to the carcase by means of a label which shows the following items of information: Plant EC Number, Carcass Number, Date of Slaughter, Carcass Weight, Sex Category, Conformation and Fatness level, as required by Commission Regulation (EEC) No 344/91. The daily classification sheet is normally produced in triplicate, with one copy retained by the plant, one by the Veterinary Office at the plant and one forwarded to and held on file at BCC headquarters in Wexford.

3.14 Prior to classifying, the Classification Officer must ensure that the carcass has been dressed to the Standard Dressing specification. In addition, the officer must systematically check that weighing of the carcass and recording of classification data is done accurately and that this information is returned to the producer in compliance with Commission Regulation (EEC) No 2191/93.

3.15 Department of Agriculture & Food supervision of the weighing procedure includes routine checks of the abattoir scales, manual recording of carcass weights and crosschecking against the Daily Classification Sheet and also the re-weighing of a number of carcasses.

## **Chapter 4 - Supervision/Control of Beef Carcase Classification Scheme**

### **Monitoring And Supervision**

- 4.1 The accuracy and consistency of classification and other related duties is monitored by Classification Officers themselves, the District Superintendents, the National Standards Panel and the EU Control Committee.
- 4.2 To ensure ongoing accuracy, Classification Officers routinely carry out a check on a sample of cold carcasses that they have classified the previous day. In addition, classification officers generally spend four days per month at a non-headquarters abattoir. This allows carcasses of varying qualities to be available to each classification officer to ensure that uniform standards are applied in all abattoirs.
- 4.3 In addition to self-monitoring by the Classification Officers themselves, the five Regional Supervisors, each of whom is headquartered at a slaughter plant and also has responsibility for four to five other plants, visit these other plants generally once per fortnight. The purpose of these visits is to ensure consistency of classification across plants.

### **National Standards Panel**

- 4.4 As required by Commission Regulation (EC) No 1993/95, unannounced carcase classification checks are carried out twice per quarter at each establishment where classification takes place. These checks are carried out by the National Standards Panel, which is comprised of either the Agricultural Inspector or Assistant Agricultural Inspector and one of the two Area Supervisor staff employed in the Beef Carcase Classification scheme. Where possible the local District Superintendent also attends as an observer. A minimum of forty carcasses per classifier is checked during the Standards Panel visit.
- 4.5 Where a significant number of incorrect classifications or other non-compliance is found, the number of carcasses assessed and the frequency of checks by the Standards Panel must be increased. Furthermore, in extreme cases of inaccuracy, the approval of

an individual classifier may be revoked. However, in cases of minor inaccuracy, and in any event, in the interest of good practice, on-going in-service training is routinely provided by the District Superintendent for all his staff. As an additional measure, backup is also available from management staff at Area Supervisor/ Assistant Agricultural Inspector / Agricultural Inspector level, as required.

### **European Commission Control of Classification Standards**

- 4.6 In addition to the foregoing checks, the EU Control Committee visits each Member State regularly to ensure that classification standards are evenly applied throughout the Community. This Committee is comprised of EU Commission experts and also experts from Member States, who in addition to checking all aspects of classification, examine the price reporting system and discuss policy issues on a broad basis. The visit normally takes a week to complete and includes visits to 7 or 8 slaughter plants. The most recent visit to Ireland was in March 2002. A report is subsequently produced by the Commission containing details of the visit, conclusions reached and recommendations made. This report is then circulated to all Member States and presented for discussion to the EU Commission Working Group on Classification.

### **Appeal System**

- 4.7 Where a producer is not satisfied with the classification result there is recourse to an appeal system. Carcasses that have been conventionally hung, i.e. hung by the shank tendon, can be re-inspected at any time prior to de-boning or removal from the slaughter plant. However, where carcasses have been aitch-bone hung, a re-assessment cannot take place because the carcasses will have been distorted. Where carcasses are upgraded following an appeal, the abattoir will return the revised classification to the farmer.
- 4.8 Where possible the appeal is carried out by a classification officer who has not carried out the initial classification. However, where the producer is still not satisfied and the carcase remains available, a supervisor will carry out a re-assessment as required. Slightly over 1% of carcasses are appealed including those related to sex category, and approximately 25% of determinations are amended.

## **Chapter 5 - Inputs**

### **Staff Complement**

5.1 The Beef Carcase Classification Group is presently comprised of a total of 2 inspector and 63 technical grade staff. The latter comprises 56 Supervisory Agricultural Officers, 5 District Superintendents and 2 Area Superintendents. Following the Technical Agricultural Officer restructuring agreement in 1997, the number of Area Superintendents was increased to 3, but this reverted to 2 in 2000. Annex 5 sets out the Beef Carcase Classification staffing structure.

### **Costs**

- 5.2 Staff numbers in the Beef Carcase Classification (BCC) area have been fairly stable over the years. With the exception of one or two relatively low output plants, it has been customary to have two classification officers headquartered at each plant. Historically, there was only one Area Superintendent (AS) post in BCC. Further to a restructuring agreement for technical staff within the Department, the number was increased to three in 1997. However, this was reduced to two in '99/'00. Full details of staff numbers over the years are given at Annex 10.
- 5.3 Costs directly related to individual staff members at classification officer and supervisory levels include salary and allowances, overtime, travel and subsistence. Other costs include those related to the provision of classification labels, protective clothing, and equipment for classification officers etc. The total of both areas are given in the following table . Full details of staff costs are set out in Annex 10.

<b>Year</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>Direct Staff Salary Costs (€)</b>	1,761,700	1,823,900	2,250,100	2,316,700	2,326,075
<b>Total Staff Costs (€)<sup>a</sup></b>	3,021,143	3,127,810	3,858,701	3,972,913	3,988,991
<b>Costs including Allowances, Overtime, T&amp;S</b>	710,800	899,500	764,800	698,100	644,249
<b>Equipment (€)</b>	81,960	70,153	67,664	117,829	58,896
<b>Total (€)</b>	3,813,903	4,097,463	4,691,165	4,788,842	4,692,136

<sup>a</sup>As defined by the Department of Finance document–Costing of Civil Service Staff Time

5.4 Total Staff Costs and other related costs have increased from €3,813,903 in 1998 to €4,692,136 in 2002, with the cost per carcass classified increasing from €2.24 to €3.03, as is shown in the table below:

<b>Year</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>Total Costs (€)</b>	3,813,903	4,097,463	4,691,165	4,788,842	4,692,136
<b>No. Classified</b>	1,702,032	1,843,580	1,613,662	1,654,806	1,548,890
<b>Average Cost per Carcass Classified</b>	€2.24	€2.22	€2.91	€2.89	€3.03
<b>Average Carcass Value</b>	€96	€640	€730	€672	€663
<b>Classification Cost as % of Carcass Value</b>	0.32%	0.35%	0.40%	0.43%	0.46%

### **Activities at Slaughter Plants**

5.5 The work of the Beef Carcass Classification Marketing and Trade Group includes more than just carcass classification. At slaughter plant level the Classification Officer's duties include the weekly checking and return of detailed price reports and the collation and return of slaughter statistics to HQ at Johnstown Castle. In addition, when market support schemes operate, e.g. Intervention, or Special Purchase Scheme,

Classification Officers may be required to carry out secondary classification i.e. a re-check of the classification of the carcase at the point of intake into Intervention.

### **Activities at HQ**

- 5.6 HQ operations include the preparation and circulation of weekly slaughter statistics, weekly price reports and quarterly classification results. In fact, Ireland is unique in being the only Member State that publishes in the national farming press and on the Department's website, individual slaughter plant prices on a weekly basis. The Department also publishes on its website, both the national and individual slaughter plant quarterly classification results.
- 5.7 Other areas of work dealt with by HQ Inspectorate staff include European Commission related duties, in particular, the preparation of detailed Annual Reports for the Commission including the classification outcome for the national kill by percentage, by number and weight of product, Standards Panel results etc. It also includes submissions on working documents and amendments to EU legislation. There is also an EU requirement for cattle price reporting, whereby calf and weanling prices are collected by local Department staff at reference marts. These prices are forwarded to HQ Wexford and analysed. The prices information is then forwarded to the European Commission and also circulated to interested parties in Ireland.

### **Other Activities**

- 5.8 Other work areas include market intelligence for Beef Policy Division and recommendations on various issues that arise from time-to-time. As EU market support schemes like Intervention, or Emergency Measures such as the Purchase for Destruction Scheme (PFD) and Special Purchase Scheme (SPS), are effectively driven by the Beef Carcase Classification system, BCC HQ staff also have a major input in the preparations for and operation of these schemes

## Chapter 6 – Outputs

### **Carcases classified and plants serviced**

6.1 The number of carcasses classified peaked in 1999 at over 1.8 million, but the figure has generally stabilised at over 1.6 million per year since then. The Department has provided a beef carcass classification service at 30 plants for the past four years.

<b>No. of Carcasses Classified 1998 to 2003</b>							
Category							
	A	B	C	D	E		
Year	Young Bull	Bull	Steer	Cow	Heifer	Total	No. of Plants Serviced
1998	12,132	10,074	989,544	382,349	307,933	1,702,032	29
1999	21,459	13,063	1,045,183	388,926	374,949	1,843,580	29
2000	47,608	12,091	882,442	338,049	333,472	1,613,662	30
2001	63,724	15,024	927,969	353,302	294,787	1,654,806	30
2002	38,976	17,576	847,012	303,536	341,790	1,548,890	30
2003	54,002	18,533	862,558	318,987	371,669	1,625,779	29

### **Slaughter Figures**

6.2 Slaughter figures are returned to Department Headquarters on a weekly basis and provide data for the weekly industry-wide bulletins: An Bord Bia Weekly Market Monitor, Farming Independent Supplement and Irish Farmers Journal.

### **Publication of Results**

6.3 The classification results on a national and individual abattoir basis are published on the DAF website. Examples are shown at Annex 11.

### **Price Reporting**

6.4 Beef Carcass Classification describes carcasses in a standardised manner. It therefore provides the basis for the Beef Price Report system, which is published on a weekly basis. These prices not only include the national abattoir prices, but they also detail

individual abattoir prices for each quality of carcase. This latter information, which is unique within the EU, is made available to the national farming press and is also included on the Department website. Price reporting provides a guideline for farmers when they are selling cattle. An example of a weekly price report for the EU Commission is given at Annex 12. Similarly an example for the industry is included at Annex 13.

### **Annual Reports to the European Commission**

- 6.5 A range of reports is submitted to the European Commission. These include:
- The annual classification outcome by Sex Category;
  - A detailed report evaluating total national slaughterings, by Sex Category, Conformation, Fat Level and weight of carcase. This report provides the basis for the coefficients to be used in the following year for calculating national and EU reference prices;
  - A report of the Standards Panel findings, including overall frequency of visits, findings in relation to the accuracy of classification and also a report on the level of compliance with carcase dressing specifications; and
  - A listing of slaughter plants reporting prices and their respective outputs.

## **Chapter 7 - Impacts**

### **Intervention**

- 7.1 Since its introduction in the early 1980's, classification has enabled the price levels paid to beef producers in all Member States to be reported in a standardised manner. When marketing difficulties arose within Member States, appropriate action could then be taken by the Commission. In the late 1980's and early 1990's this mainly involved short-term removal of product from the market such as Intervention purchase of excess beef stocks, which were later sold either inside or outside the Community.
- 7.2 In Ireland's case in some years, up to 90% of steer carcasses were purchased for Intervention. Again following the 1996 BSE crisis there was a large build-up of Intervention beef stocks and by the end of 1997, stocks exceeded half a million tonnes. Relatively little beef was put into Intervention during 1998 and 1999 and at the same time the EU Commission announced Intervention sales on a regular basis. By the end of 1999 Intervention stores in a number of Member States were either completely or nearly empty and in July 2000 the last Intervention stocks were sold. Intervention was triggered again in late 2001 due to the drop in beef consumption resulting from the BSE crisis but has since been fully de-stocked.

### **Purchase For Destruction**

- 7.3 As the potential surplus of beef became substantial in late 2000, emergency measures were required. For the first six months of 2001, this took the form of a Purchase For Destruction Scheme under which 238,873 cattle were purchased in Ireland by the EU at commercial prices. This product could not be placed on the market and had to be destroyed.

### **Special Purchase Scheme**

- 7.4 For the 2<sup>nd</sup> half of 2001 and in early 2002, a further scheme, the Special Purchase Scheme, was introduced which withdrew over 230,000 cattle, mainly cows, from the market. With the exception of 600 tonnes, which was canned and distributed for charitable purposes within Ireland, all of the beef purchased was destroyed.

7.5 The main objective of these schemes was to maintain farm incomes by removing surplus beef from the market. As cattle prices were well maintained during these periods, both schemes were regarded as a success. The outcome demonstrates that the Beef Carcase Classification Scheme has continued to retain its relevance up to the present time, providing a standardised price reporting mechanism and also facilitating the operation of effective emergency measures for beef purchase.

### **Private Storage Aid**

7.6 Under the Agenda 2000 reforms, it was agreed that from July 1<sup>st</sup> 2002 private storage aid should be the favoured method of support in the beef sector, rather than public Intervention. Only in the case of extreme market conditions would there be recourse to Intervention.

### **DISTRIBUTION OF IRISH BEEF PRODUCTION ('000 tonnes carcase wt.)**

	1996	1997	1998	1999	2000	2001	2002	2003
Total Production	565	579	591	626	555	568	511	560
Domestic Consumption	56	56	58	60	60	60	60	60
Intervention	74	73	23	11	-	11	-	-
SPS	-	-	-	-	-	61	6	-
PFD	-	-	-	-	-	91	-	-
Total Exports	435	450	510	555	495	345	445	500
U.K.	70	95	85	95	110	220	245	265
Other EU	110	90	130	150	135	70	110	150
3 <sup>rd</sup> Countries	255	265	295	310	250	55	90	85

7.7 The market intelligence, including prices, (described under outputs) is used by the Department in developing national policy in relation to EU and WTO related negotiations. This intelligence is particularly relevant at the fortnightly meetings of the EU Beef Management Meeting where market issues are discussed and market supports, such as export refunds, are put in place based on the market situation across the Community.

7.8 The beef carcase classification scheme has provided a basis for a quality payment system. While the level of differential has varied widely over the years and much flat

pricing operated in the late 1990's, in recent years and particularly 2002 sizeable premia/penalties have developed, especially with regard to conformation. Price differentials for each category, steers, heifers and cows for 2001 and 2002 are shown in Annex 15.

- 7.9 As shown in the table at 7.6, there have been continuous changes in the export destinations for Irish beef. It is generally accepted that the markets providing the best return for quality Irish beef over the years are the Southern European markets of Italy, Spain and France. These markets mainly require well-conformed carcasses without excess fat. While there has been much discussion over the years on the importance of changing the genetic makeup of the national herd to service these markets, the classification results show that there has been no major increase in the level of well-conformed cattle in recent years. While fat levels have decreased, partly due to slaughtering at a younger age, there has been no matching improvement in conformation. This is evident from the carcass classification results 1998 to 2002, as set out in Annex 14.
- 7.10 A major improvement in beef carcass conformation may now be imminent. The Irish Cattle Breeding Federation (ICBF) has identified in their 2002 Annual Report that the genetic makeup of suckler dams is presently undergoing major change with an increase in 1999-2002 in Belgian Blue, Charolais and Limousin bred dams of 33%, 22% and 12% respectively. Another major potential for improvement is the Linear Assessment of pedigree animals, which is now operating for all beef breeds. The improvement in the beefing qualities of the suckler dam, combined with an improvement in the beefing merit of sires will likely produce an improvement in classification scores in future years.
- 7.11 In conclusion, the EU Beef Carcass Classification Scheme has been successful in its primary purpose i.e. it has provided a standardised classification and price reporting system in all Member States. This has enabled the implementation of effective market intervention measures over the years. However, while fat has decreased to a level more suitable to the market, there has been no noticeable long-term improvement in the conformation of Irish cattle.

## **Chapter 8 - Compatibility of the Objectives of Beef Carcase Classification with the Statement of Strategy 2003-2005**

### **Statement of Strategy**

- 8.1 A Business Plan is prepared each year for the Beef and Sheepmeat Division and is based on the Department's Statement of Strategy. This procedure has been ongoing since the mid 1990's. Each element of Beef Carcase Classification is identified and reviewed in terms of its compatibility with the specific objectives of the current Statement of Strategy. Goal 1, in the Statement of Strategy is of particular relevance to this area of work. "Develop an internationally competitive agri-food sector and facilitate trade in agriculture and food products". The specific objective of the Division in this regard is to improve market orientation of beef and to ensure that carcasses are classified in accordance with legislative standards.
- 8.2 Goal 6 "Develop our human and physical resources and our operational capabilities and ensure the delivery of quality services to our customers, both internal and external". The specific objective in this regard for BCC is to have a fully computerised classification and price reporting system in place by the end of 2003 to process beef slaughter plant data.

## **Chapter 9 - Staffing Mechanisms In Other Member States**

- 9.1 While all Member States as Competent Authorities have fairly similar approaches to the control of classification, most have adopted a different approach to Ireland, with regard to the provision and staffing of the classification service. In the majority of Member States, classification is carried out by plant employees, with independent bodies providing staff in a few cases. In addition, classification is not provided by Ministry staff in any of the ten Accession Countries.
- 9.2 At present, only two countries apart from Ireland provide an official classification service. These countries are Greece and Portugal, though the former has a combination of Ministry and private classifiers. In all other Member States the service is provided either by plant employees or by independent organisations. In all respects these arrangements comply with EU legislation. Details of the staffing arrangements for the existing fifteen Member States are provided in the following table .
- 9.3 There is no charge to the producer for classification at present in Ireland. In the Member States, where classification is by third party an amount to cover its cost is generally withheld from the payment to the producer. There is no standardised system across Member States where classification is done by slaughter plant employee, as some slaughterers directly levy the producer, while others do not.

**Body Operating Scheme Beef Carcase Classification in EU Member States**

<b>EU Member State</b>	<b>State/ Gov. Body</b>	<b>Plant Employee</b>	<b>Independent 3<sup>rd</sup> Party</b>	<b>Plant &amp; 3<sup>rd</sup> Party</b>	<b>Comment</b>
Ireland	✓				Department of Agriculture and Food (DAF) staff
UK England, Scotland, Wales  N. Ireland			✓	✓	Meat & Livestock Commission (MLC) in 2/3 of all plants Plant Employees in 1/3  Livestock & Meat Commission (MLC) all plants
Finland		✓			Plant Employees
Sweden		✓			Plant Employees
Denmark		✓			Plant Employees
Germany			✓		No. of independent organisations
Netherlands			✓		Private independent organisation (CBS)
Luxembourg		✓			Plant Employees
Belgium		✓			Plant Employees
France		✓			Plant Employees
Spain		✓			Plant Employees
Portugal	✓				Ministry staff
Austria				✓	Seven independent organisations and Plant Employees in small plants i.e. <30 bovines/week
Italy		✓			Plant Employees
Greece	✓	✓			Ministry of Agriculture staff and private classifiers
<b>Total</b>	<b>3</b>	<b>9</b>	<b>3</b>	<b>2</b>	

## **Chapter 10 - EU Control Committee and Standards Panel Findings, Appeals to the Office of the Ombudsman**

### **EU Control Committee Findings**

- 10.1* In the 1980's and early 1990's, the EU Control Committee normally visited each Member State at least every second year. However, with enlargement the frequency has lessened and the most recent visits to Ireland were in 1997 and 2002. In the early 1990's the Committee recommended that slaughter plants move to computerised labelling systems to avoid the possibility of error, or possible fraud. All plants with a classification service subsequently adopted computerised systems. On a number of occasions the Control Committee identified the Irish prices system as being over-laborious and the sample size as being low. It recommended that the price reporting system be updated so that all prices could be included. This recommendation has now been fully implemented i.e. since the end of 2003, the prices detail for all commercial slaughterings are electronically transmitted from the export approved slaughter plants to the Department's website and analysed using modern computer systems. The Committee has repeatedly identified the existence of flat-rate pricing in Ireland as defeating one of the objectives of classification. While this problem is still ongoing, it is hoped that the expected higher level of confidence in automated classification will facilitate the implementation of a more appropriate payment structure in the near future.
- 10.2* All export-approved plants in Ireland operate the EU standard dressing specification. Generally no real problems were found with the quality of dressing over the years and in fact during the 2002 mission, the EU Committee reported that some carcasses had near perfect dressing.
- 10.3* Where a serious problem is found in any aspect of beef carcass classification or price reporting, a return visit is normally made within one year. A visit of this nature has never been made to Ireland.
- 10.4* Generally across Member States there is a good level of compliance with the regulations. However, on occasion, a tendency to underscore or overscore carcasses may be found by the EU Control Committee. Evidence that appropriate action has been taken is normally seen at an early return visit by the Committee. A problem that can

arise in other Member States is the incorrect calculation of prices, due to the use of dressing specifications other than the EU Standard Dressing Specification and the failure to apply the correct co-efficients in calculating national prices.

### **Standards Panel Control Checks**

*10.5* In Ireland the requirement to carry out unannounced control visits once per quarter was generally met over the years. The Commission in recent years requires an annual report of these visits including the findings with regard to accuracy of classification. Between 40 and 60 carcasses per classification officer are checked by the Standards Panel at each visit.

### **Appeals to the Office of the Ombudsman**

*10.6* The number of appeals to the Office of the Ombudsman has generally been in the order of one per year. The appeals have generally related to sex category, i.e. heifer versus cow and the Ombudsman has found in the Department's favour in all cases.

## **Chapter 11 - Introduction of New Technology**

- 11.1* Carcase classification as it has operated to date has been reliant on human judgement. Regardless therefore of the level of training of classifiers and the quality of subsequent supervision, there may be some lack of confidence in a regime of this nature. This lack of confidence in the reliability of classification can make it difficult to reach agreement on a quality-based system that reflects the true value of the carcase to the industry. An alternative is now available viz. classification by machine.
- 11.2* The potential for using mechanical means for beef carcase classification was first recognised in the mid '80's, with research initiatives on Video Image Analysis (VIA), mainly in Denmark. VIA involves taking images of a carcase with one or more cameras, then applying specialised software to extract data from them, such as lengths, areas, volumes, angles and colours. The primary aim may have been to classify carcasses on the EUROP scale, using measurements taken from carcase images. However due to the amount of data made available by these images, it was also possible to make predictions on carcase yield. In the late '90's especially, the European Commission started to actively examine the possibility of introducing legislation that would allow the use of mechanical classification systems.
- 11.3* In 1999/2000, in response to requests from the Irish beef industry, the Department of Agriculture and Food, and Teagasc, in collaboration with Dawn Meats (Midleton) Ltd. carried out trials on three machines, i.e. VIAscan (Australian), BCC (Danish) and VBS2000 (German). These trials were held over a six-week period in July/August 1999 and a two-week period in March 2000. In total almost 10,000 carcasses were classified. This was the first time that machines were installed side-by-side on a line and tested simultaneously. Apart from testing the ability of the machines to classify according to the EUROP scale, their ability to predict meat yield was also examined. The results of the trial were published in detail at the time by the Department of Agriculture and Food, and Teagasc in a booklet entitled "Objective Beef Carcase Classification – A Report of a Trial of three VIA Classification Systems".
- 11.4* In summary, the results of the trials showed that the machines tested had considerable potential for predicting conformation and fat score based on the EUROP scale. The level of accuracy for all machines in predicting conformation was higher than for fat.

This was in agreement with earlier trial results in other countries. To measure the ability of the machines to predict meat yield, 400 carcasses were de-boned on-site during the 1999 trial. All three machines were able to predict saleable meat yield with a similar high level of accuracy.

*11.5* Discussions at European Commission Working Group level were ongoing with the production of various drafts of a regulation that would allow automated classification to be introduced in Member States. While there was general agreement at European Commission level and also within Member States that a machine would have to reach a similar level of accuracy to the “average” human classifier, the main difficulty was in identifying that level. A pilot test was held in Germany in 2001 to examine the European Commission’s proposed authorisation test methodology, set authorisation standards and finalise the regulation. With the availability of the results from the German test, the results from the Irish trials and other information built up over the years, a regulation allowing classification to be carried out by automated means was agreed in mid 2003 viz Commission Regulation (EC) No 1215/2003. This regulation set down the manner in which an authorisation test should be conducted and the minimum level of accuracy for a machine to be licensed.

*11.6* Commission Regulation (EC) No 1215/2003 requires, in brief, that the authorisation test includes a jury comprised of a minimum of five classification experts, two from the host State and three from other Member States, working independently and anonymously. Using 15-point scales, each conformation and fat class divided into three subclasses, the conformation and fat scores of the machine are then compared with the median score of the jury. Points are awarded to the machine for each carcass assessed, based on the level of agreement between the median score of the jury and the machine score. Where there is full agreement, i.e. where both the median of the jury and machine score are identical, a full 10 points is awarded. Differences of 1/3 class are then penalised as shown in the table below, with an accelerated level of penalty for larger differences. As fat is more difficult to assess, the level of penalty for differences in relation to fat score are lesser than for conformation.

*11.7* An authorisation test has to include a minimum of 600 carcasses that is representative of the national kill, in terms of sex category, conformation and fat. To be authorised, a machine must achieve at least 60% of the maximum points available. For example, in a test of 600 carcasses, a maximum of 6,000 (600 x 10 points) could be achieved, with a

minimum of 3,600 points required for authorisation. In addition, maximum tolerance levels are set with regard to Bias and Slope, which serve to indicate the level of systematic under or over scoring. A further requirement is that the maximum percentage of carcasses that a machine fails to classify cannot exceed 5%. Tables showing the points system and the main authorisation criteria are included below.-

<b>Regulation 1215/2003 – Points System</b>		
	Conformation	Fat
Machine in full agreement with median of Jury	10 Points	10 Points
Machine score differs by 1/3 class (up or down)	6	9
Machine score differs by 2/3 class (up or down)	-9	0
Machine score differs by one class (up or down)	-27	-13
Machine score differs by < one class	-48	-30

<b>Regulation 1215/2003 – Minimum requirements for Authorisation</b>		
	Conformation	Fat
Points Awarded	60%	60%
Bias	+/- 0.30	+/- 0.60
Slope of regression line	1+/- 0.15	1+/- 0.30
Failures	Max 5%	Max 5%

11.8 An authorisation test of the three machines in Ireland took place in November 2003.

All three machines comfortably exceeded the minimum requirements, both with regard to conformation and fat. In addition, all machines were well within all tolerance levels.

The detailed results are included in the table below.

<b>Irish Authorisation Test Results</b>						
	<b>Conformation</b>			<b>Fat</b>		
Machine	BCC2	VIAscan	VBS2000	BCC2	VIAscan	VBS2000
Points	76.7%	75.8%	76.3%	76.0%	81.1%	78.0%
Bias	0.09	0.03	0.01	0.10	0.04	0.05
Slope	0.91	0.88	1.00	1.06	0.83	0.92
Failures	1.2%	0.3%	0.2%	1.2%	0.3%	0.2%
Manufacturer	Danish	Australian	German	Danish	Australian	German
Note: For authorisation, a minimum of 60% of the maximum available points must be achieved						

*11.9* In addition to specifying the requirements with regard to the authorisation test, EU Regulation 1215/2003 also details the ongoing checks that must be carried out on automated classification systems. For the first twelve months, the normal frequency of checks must be trebled to six per quarter. A minimum of 40 carcasses must be selected at random. The accuracy of the machine must be assessed using the system of points and limits as used in the authorisation test. The slaughterer's record of daily checks on the calibration and functioning of the machine must be verified. In addition the accuracy of the sex category and compliance with the carcass dressing specification must be checked.

*11.10* A Scheme of Grant Assistance towards the purchase and installation costs of mechanical carcass grading machines, was recently announced for the Irish beef industry and the closing date for applications was Friday, 27<sup>th</sup> February 2004. The maximum rate of grant is 40% of approved eligible expenditure. Costs eligible for assistance will be limited to the purchase and delivery of the automated classification equipment, including hardware, computer software and software integration, up to a maximum of €150,000 and installation costs not expected to exceed €20,000.

*11.11* Producers especially have been very keen to move to classification by machine and have continually made their views known to the government. As a result, the Social Partnership Agreement 2003-2005, "Sustaining Progress", states that the government is committed to the introduction of automated classification at the earliest possible date. The requirements set down in Regulation 1215/2003, both in relation to the

authorisation of machines and post-installation checks should provide a high level of confidence in this new system.

## **Chapter 12 – Conclusions**

- 12.1* The Department of Agriculture & Food, in operating a voluntary national system initially, and since 1982 the mandatory European Beef Carcase Classification scheme, has provided a sound assessment of the quality of beef carcasses for almost twenty-four years. Considering that it is generally based on a subjective assessment of carcasses, there has been a reasonable level of acceptance of the classification system by all stakeholders.
- 12.2* The Beef Carcase Classification Scheme has both directly and indirectly provided a basis for the effective management of the EU beef market over the years. The price reporting system is the tool used by the EU Commission for intervening in the market by means of support systems such as export refunds and intervention. In addition the system identified a requirement for special emergency market measures such as the Purchase for Destruction Scheme and the Special Purchase Scheme to maintain producer prices. Associated slaughtering output figures provided further guidance to the Commission in relation to their actions.
- 12.3* From one viewpoint the effectiveness of BCC has varied over time. In some years a reasonable level of premium/penalty operated based on the classification outcome, but unfortunately at other times flat-price payments were the norm where producers were paid the same price per kg regardless of the conformation or fat level of the carcase. Annex 15 shows the size of differential that operated in 2001 and 2002.
- 12.4* While a substantial improvement has already been made with regard to the percentage of better-conformed carcasses with an optimum level of fat , it is confidently expected that conformation will improve in the immediate future. The input of the Irish Cattle Breeders Federation (ICBF) should serve to accelerate this movement especially with the linear assessment of pedigree beef animals and ICBF's newly introduced use of individual classification results from the slaughter plants to augment their progeny-testing programme. The ICBF 2002 Annual Report has identified that the genetic make-up of the suckler herd is changing rapidly with the substantial increase in continental breed beef-cross dams in the period 1999 – 2002.

- 12.5 The classification system has allowed Ireland to identify and fill niche markets such as the Italian market for young bulls and heifers of good conformation and low fat. Classification has both facilitated the slaughterer in identifying the quality of product required for this particular market and in turn providing feedback to the producer, who can then identify the type of breeding stock and management system capable of satisfying these specialist markets.
- 12.6 Based on the reports of the EU Control Committee, the Beef Carcase Classification Scheme in Ireland has operated successfully and in accordance with EU requirements over the years. While the quality of classification has varied from very good to excellent, any difficulties identified generally related to a slow uptake of technology, both at plant level and also within the Department. All plants now have computerised weighing and label production machines and also have direct transfer of the slaughter data to the plant computer system. The system to directly transfer classification and prices data from the plant to the Department's computer network was completed in 2003 and from the beginning of 2004 the prices reported to the Commission were based on close to 100% of abattoir prices. Prior to the implementation of this direct transfer, sampling of carcasses had to be done at each slaughter plant, with the classification and prices data then input by an external data entry bureau. The bureau costs were substantial, €153,000 in 2003. In addition therefore to replacing a laborious and dated system and facilitating a higher level of accuracy in any subsequent analyses, this measure will lead to an immediate and sustained saving of over €150,000 per year.
- 12.7 Total Staff Costs and other related costs over the past five years were €4,416,700 on average per year, with an estimated cost in 2002 of €3.03 per carcass classified. This cost seems minimal in proportion to the value of the carcass, as the earlier table at 5.4 shows. However as the value of the carcass has not increased in line with inflation, the relative cost of classification has steadily increased i.e. from 0.32% of the value of the carcass in 1998 to 0.46% in 2002. In Northern Ireland, the Livestock and Meat Commission (LMC) operates at a total cost of £1.25 (€1.79) per carcass classified. Therefore, with regard to the efficiency of operation, it must be stated that costs per carcass classified are high. Total Staff Costs form 85% of total expenditure of the scheme. Over the last four years these costs have increased by 33%, while staff numbers have remained relatively stable. Despite efforts to minimise costs, travel and subsistence expenditure has remained relatively high, mainly due to the requirement to

regularly rotate staff between slaughter plants.

*12.8* At present, Ireland and Portugal are the only two Member States where State employees are the sole providers of primary classification. The State in all other EU countries, ensures by means of a control system, that classification, whether by a third party or by the industry, is being done uniformly and in line with EU rules.

*12.9* Significant advances have been made in the development of new technology that allows for automated carcass grading techniques to be introduced. The adoption at EU level of a regulatory framework has facilitated the authorisation and control of such equipment. In Sustaining Progress the social partners are committed to the introduction of Mechanical Grading at the earlier possible time, as a replacement for the current system. In November 2003, authorisation tests were carried out in Ireland on the systems manufactured in Denmark, Germany and Australia. All three comfortably exceeded the requirements set down in the regulation and have now been licensed for operation in Irish slaughter plants.

*12.10* In the light of these technological developments, the need for modernisation in the beef sector and the level of controls that the EU sets down for the Competent Authorities in Member States, there are compelling arguments in favour of the Department withdrawing from its direct role in classification and concentrating more fully on its supervisory functions. Indeed the absolute necessity for the Department to ensure the efficient use of scarce resources makes it difficult to justify allocating staff to primary classification duties. Withdrawing staff from primary classification duties will allow staff numbers in the Beef Carcass Classification area to be reduced from 65 to 10. The staff released can be assigned to vacancies in previously approved priority areas and the elimination of the classification posts will assist the implementation of an overall reduction in public sector posts.

*12.11* Taking into account the level of financial assistance available, the cost to the industry of setting up automated classification will be relatively low. In addition, the costs going forward, i.e. the cost of having a licensed classifier available to deal with the limited number of carcasses that cannot be classified by machine, will be minimal. The licensed classifier will also be employed on other duties at the slaughter plant. Where machines are not installed e.g. in lower output plants, the cost of maintaining a licensed classifier(s) will not be prohibitive, as the experience from other Member States is that

licensed classifiers are normally involved in other slaughter-line duties e.g. the final dressing, weighing and labelling of carcasses.

*12.12* Legislation in Ireland, SI No 8 of 1994 allowed classification to be carried out by state employees only. To provide for classification by slaughter plant employees and by machine, SI No 45 of 2004 has now been signed into law. In addition to setting down the requirements regarding the licensing of classifiers, the SI includes detailed requirements with regard to the weighing of carcasses, labelling, recording of classification and weight, price reporting to the Department, information to be returned to the vendor, authorisation and use of classification machines, appointment and powers of Department of Agriculture and Food supervisory officers and penalties for the slaughterer's non-compliance with the regulations.

## **Chapter 13 - Recommendations**

- 13.1* A Departmental permanent presence in meat plants should be confined to areas where regulatory responsibility is vested in it as the competent authority. The only regulatory responsibility arising in respect of carcase classification is of a supervisory nature. Taking into account the present cost of Beef Carcase Classification (BCC) and the necessity to ensure the efficient use of resources, BCC cannot be regarded as a priority area for the allocation of over fifty technical staff at Supervisory Agricultural Officer level. Therefore, the Department should cease to employ classifiers in slaughter plants and instead re-deploy them to other areas where there is a shortage of staff resources. This would allow for the release from the BCC area of one Area Superintendent and fifty-four staff at SAO level, leaving a total staff complement of ten in the BCC group, compared to sixty-five at present.
- 13.2* Arrangements should be made for an orderly withdrawal of the Department classification staff. This will involve the training of slaughter plant staff to take over the duties of Department staff. Such training should be provided by the Department Officers as a means of ensuring uniformity in training and assessment of suitability. It would also reinforce producer acceptance of the new arrangements.
- 13.3* Three automated classification machines have now been licensed to operate in all export approved slaughter plants in Ireland. Mechanical classification is now a firm and realistic option. The Department should encourage slaughter plants to adopt this new technology. The scale of operation of the slaughtering industry in Ireland is sufficiently large to justify substantial uptake of mechanical classification. Of the 33 export-approved plants presently operating, twenty slaughter over 50,000 adult bovines each per year. This represents over 80% of total slaughter capacity.
- 13.4* As a tiny minority of carcasses cannot be classified by machine, e.g. where part of the carcase has to be removed under veterinary direction, a trained classifier must be available to classify carcasses of this nature. A slaughter plant employee, who has been trained and licensed and can otherwise be gainfully employed by the slaughterer, is ideally suited to dealing with this minority of carcasses.
- 13.5* Enhanced supervision and control measures should be adopted for the initial stages of the changeover. Requirements of this nature are included in the EU regulations with

regard to mechanical classification, specifically the frequency of visits must be trebled to six per quarter for the first year of operation of mechanical classification.

- 13.6* In plants where automated carcass classification does not operate, standards panel visits should be based on the requirements of the Regulation.
- 13.7* Further to the withdrawal of the Department's classification officers from beef carcass classification and the installation of machines, performance indicators should then be updated. Additional criteria like the number of machines installed, the percentage of the kill classified by machine and accuracy of the machine as determined by Standards Panel checks should be included. More emphasis should be placed on the monitoring of carcass conformation and fat trends over time.
- 13.8* The Department of Agriculture and Food should continue to facilitate ICBF to the maximum extent possible in arranging for classification data to be made available for genetic analysis purposes.

# ANNEX 1

## Terms of Reference for an Expenditure Review of the Department of Agriculture and Food's Beef Carcase Classification Scheme

The main objective of the EU Beef Carcase Classification Scheme is to provide a common basis for describing adult bovine carcasses in all Member States, for price reporting purposes and to enable the operation of Intervention and similar support schemes. The introductory Council Regulation was enacted in 1980 and following subsequent Council and Commission regulations the system became fully operational in Ireland in 1982. National legislation was introduced in 1994, which gave full effect to all EU legislation.

### 1. Background

#### **Brief Description of the Beef Carcase Classification Scheme**

Beef carcasses produced at export-approved slaughter plants in Ireland are classified under EU Beef Carcase Classification Regulations that provide for the operation of a standardised classification system throughout the Community. Each carcass is visually assessed and classified by classification officers of the Department of Agriculture and Food at the weighing point on the slaughterline.

The system describes three carcass classification characteristics i.e. Sex Category, Conformation and Fat.

Sex Category: There are five sex categories identified by the following codes: A (Young Bull), B (Bull), C (Steer), D (Cow), E (Heifer)

Conformation: The conformation class describes the development of the carcass profile and is assessed by visual appraisal. Conformation classes are represented by the letters E, U, R, O, P, giving an incremental scale ranging from 'P' which denotes 'worst', upwards to 'E' representing 'best' conformation.

Fat: The fat class describes the amount of fat on the outside of the carcass and in the thoracic cavity, and is also determined by visual appraisal. Five fat classes are defined, represented by the numbers 1, 2, 3, 4, 5. This incremental scale ranges from '1', which denotes least, to '5' denoting most fat.

### **Supervision and Control of Classification**

The accuracy and consistency of classification is constantly monitored by classification officers themselves and by Regional Supervisors. As required by EU legislation there are twice quarterly un-announced visits from the National Standards Panel. In addition, an EU Control Committee visits each Member State regularly to ensure that the system operates in a standard manner throughout the Community.

On-going in-service training is provided to individual officers as required and in addition classification officers are rotated between factories.

### **Staffing of Beef Carcass Classification**

Beef carcass classification in Ireland, is carried out by officers of the Department of Agriculture and Food. A total of 55 classification officers (SAO grade) and 5 district supervisors (DS) are based at slaughter plants. Beef Carcass Classification headquarters in Wexford is staffed by a total of 4 staff (AI, AAI, AS and SAO). In addition there is 1 regionally based area supervisor (AS).

## **2. Identification of Detailed Objectives**

The detailed objectives of the Beef Carcass Classification Scheme are:

1. Ensure that beef carcasses are dressed to EU standard specification, classified in accordance with EU standards, weighed and labelled accurately, and the carcass information transmitted to the producer.

2. Ensure that classification results are fully recorded, analysed, results published quarterly on a national basis and annual results forwarded to the European Commission.
3. Ensure that beef prices are collected/analysed weekly, forwarded to the European Commission on time and published nationally.
4. Provision of beef carcass classification results as a basis for the improvement of carcass quality, including market orientation.
5. To provide the Department with relevant information for EU meetings such as the Beef Management Committee.

### **3. Examination of the current validity of these objectives and their compatibility with the Statement of Strategy**

The stated objectives will be examined vis-à-vis the Department's Statement of Strategy.

### **4. Examination of the extent to which these objectives have been achieved, commenting on the effectiveness of their achievement**

A detailed examination and analysis (for the period 1998-2002) of the following areas to be carried out:

- EU mission reports, including some general comment regarding other Member States
- Percentage of slaughter plants being serviced
- Carcass classification results including an analysis of any improvement/deterioration in cattle quality
- Results from the appeal system
- Ombudsman's report

- Destination of Ireland's output of cattle and beef
- Importance of the beef industry in the agricultural and national economy

**5. Identification of the level and trend of costs and staffing resources including comments on the efficiency with which the Department has achieved its objectives**

For the period 1998-2002, all costs (salary, travel, overtime payments and training costs), personal protection equipment, other equipment/supplies, and any other costs will be assessed and reported. The efficiency with which the Department achieved its objectives will be examined by comparing the costs against the number of plants serviced, animals classified etc.

**6. Identification of the outputs/outcomes accruing from the Beef Carcase Classification Scheme and the trend of these outputs/outcomes**

Under outputs, the number of carcasses classified for each of the five years (1998-2002) will be presented. Likewise the outcomes such as, availability of accurate classification, adherence to carcase dressing specification, accurate weighing, correct labelling, accurate and complete Daily Classification Sheet and Producer Returns, follow-on statistics etc. for the user groups e.g. producer, processor, wholesaler/retailer and beef promotional body will be identified and discussed.

**7. Identification of suitable performance indicators that can be used to monitor performance**

- An examination of the European Commission Carcase Classification Control Committee reports both in relation to Ireland's level of compliance and also contrasting it with the EU norm.
- A year-by-year (1998 onwards) examination of Standards Panel results.

- An examination of the national appeals system including the number of carcasses appealed and the outcome.
  - An evaluation of Ireland's compliance with EU weekly and annual reporting requirements and also those nationally determined.
  - An examination of Ireland's involvement in developmental areas e.g. the progression of mechanical classification internationally and the development of a computerised classification and price reporting system nationally.
8. Evaluate the degree to which the objectives warrant the allocation of public funding on a current and ongoing basis and examine the scope for alternative policy or organisational approaches to achieving these objectives on a more efficient and/or effective basis.

The areas that by regulatory requirement must be administered by the Department, will be identified. Those other areas in which the Department is currently involved will be examined and contrasted with their operation in other Member States. Where possible the outcome/effectiveness/efficiency of alternative methodologies in other Member States will be analysed.

Mindful of the up-to-date progress of mechanical classification at EU level, a structure will be identified which should enable the operation of a classification service that will be effective, efficient and cost effective for the producers, the beef processing industry and the state.

## 9. **Workplan**

The Review will be carried out by an Assistant Principal in the Beef and Sheepmeat Policy Division and an Agricultural Inspector in the Livestock, Beef and Sheepmeat Division, with suitable backup as appropriate from within the Department. Once the Terms of Reference have been signed off, work on the report will commence with a view to completion prior to end of October 2003.

The Review will be supervised by an operational steering committee comprised of the Principal Officer in the Beef and Sheepmeat Policy Division and the Senior Inspector

Livestock, Beef and Sheepmeat Division. A high level steering committee will oversee the Review.

# ANNEX 2

## Cattle and Beef industry in Ireland

### Primary Agriculture

- 2.1 Agriculture is of primary importance to the Irish economy. Ireland has a total land area of 6.9 million hectares, of which 4.4 million ha are used for agriculture and .65 million ha (9.4%) for forestry. 80% of the agricultural area is devoted to grass, 11% to rough grazing and 9% to crop production.
- 2.2 There are a total of 136,500 farm holdings in Ireland, almost all of which are family farms. Average farm size is 32.0 hectares and 47% of farms are under 20 ha. 13% of farmers are under 35 years of age and 41% are over 55.
- 2.3 A mild climate and high rainfall provide the ideal conditions for growing grass and a natural environment for animal production. Irish farmers are very conscious of the importance of operating within a sustainable agricultural industry. A measure of their appreciation of the environment is the high level of participation in the Rural Environment Protection Scheme (REPS). Around 45,000 farmers participated in REPS 1, there are 36,000 active participants in REPS 2 and it is anticipated that the figure for the latter will reach 55,000 by 2006.
- Further details on agriculture in Ireland are provided at Annex 3.

### Agri-Food Sector

- 2.4 The agri-food sector contributes very significantly to the national economy and last year accounted for 8.4% of GDP, or in nominal values some €9.5 billion. Primary agriculture remains more important to the economy in Ireland than in most other EU Member States with the exception of Spain and Greece. Last year primary agriculture accounted for 3% of GDP, and the total value of output at producer prices amounted to €4.7 billion.

The value of output at producer prices for cattle and calves represents 26%, of total agricultural output and a value of some €1.23 billion.

## **Employment**

- 2.5 In employment terms the sector is also hugely significant. In 2003 some 108,200 were employed in the primary agriculture economy. In addition a further 51,600 were employed in the food, drinks and tobacco sector bringing the total to 160,000 or 9.5% of total national employment.
- 2.6 The livestock sector is by definition rurally based and contributes enormously to the economic and social development of rural communities across the country. This is equally true of production at farm level and secondary processing which typically forms the backbone of areas experiencing weaker economic development. Most of the livestock processing industry is based in rural areas where it forms a major part of the employment opportunities locally.

## **Exports**

- 2.7 Agri-food exports in 2002 were valued at almost €6.7 billion representing 7.1% of total exports in the Irish economy. Included in this was a value of €3.6 billion for primary agricultural exports, or 3.8% of total exports. In this regard some 21.4% of exports derived from dairy products and ingredients, amounting to €1.45 billion while 17.4% were beef exports, contributing €1.2 billion.
- 2.8 In addition to this performance the products of these sectors, when exported to Third Countries attract export refunds of some €190 million. Furthermore, a range of cattle premiums is paid to farmers as direct payments and this amount to €860 million annually. As there is virtually no import cost element in this production the benefit to the economy is accordingly far greater than that for industrial exports. The importance of these sectors is reflected in Ireland's unique dependence on export markets for its agricultural output with a 90% export requirement in the dairy and beef sectors.

## **Cattle Production**

- 2.9 Cattle production is an important enterprise on most farms in Ireland, and production is mainly based on grass. Calves for beef come from both the dairy and suckler herds. The total number of suckler cows and herds grew significantly in the early 1990's from 624,000 suckler cows in 1990 to its present size of approximately 1.2 million suckler cows, in over 75,000 herds. The average size of a dairy herd is much larger with 1.3 million dairy cows in 25,000 herds.
- 2.10 The dairy herd is comprised almost totally of Friesian cows, but in the order of 50% of these are bred to beef bulls. It is estimated that over 60% of suckler cows are crosses of continental breeds such as Charolais, Limousin, Simmental and Belgian Blue, with the remainder made up of Hereford and Angus types. Almost 90% of all suckler cows are bred to continental beef breed bulls. With the continual improvement in the beef bulls used, retention of higher potential suckler dams, and animals being slaughtered earlier, the quality of the beef product should improve.
- 2.11 Cattle are reared mainly on grass, which is grazed in the Spring, Summer, Autumn, and generally consumed as silage indoors, predominantly in the Winter months. Calves in both dairy and suckler herds are generally born in Spring, with almost 85% born in the January to May period. Cattle produced on Irish farms have two main outlets. Animals are either exported live to EU or third country destinations, or finished for slaughter in Irish abattoirs.

## **Live Exports**

- 2.12 The live export trade has varied greatly over time and especially in recent years. In 1999 a total of over 400,000 bovine animals were exported to various destinations. However, due to the BSE scare across Europe in late 2000, this figure reduced to 100,000 in 2001. Full details of live exports from 1998 to 2003 are included at Annex 3.
- 2.13 In addition to the effect that live exports have on the total number of animals available for slaughter, the quality of animals exported can have an impact on the classification outcome. In the years 1998, 1999 and 2000 large numbers of good quality weanlings were exported, at premium prices. The number of cattle exported was almost 99,000 in

1998, over 214,000 in 1999 and over 177,000 in 2000. These cattle comprised of approximately 1/3 male and 2/3 female and were mainly exported to Spain and Italy. Despite the improvement in the overall quality of the suckler herd in the meantime, a lesser percentage of steers and heifers achieved U grade in the years of slaughtering affected by this trade, i.e. 2000 to 2002.

2.14 In 2003 live cattle exports from Ireland increased by 48% to reach 221,000 head. This increase was mainly driven by strong demand in Continental EU markets, which accounted for 184,000 head, while Lebanon remains the sole Third Country market outlet at 37,000 head. The live cattle trade for 2004 is expected to remain firm, driven by good demand on the Continent and increased sales to the Lebanon.

### **Abattoirs**

2.15 The beef abattoir industry in Ireland consists of some forty EU export approved abattoirs and in excess of 300 domestic abattoirs that are confined to supplying the home market. Over 50% of cattle supplied to abattoirs are steers, with the remainder being heifers, cows and a relatively small number of bulls.

### **Beef Markets**

2.16 As the total population in Ireland is 4 million people, domestic consumption compared to production is relatively low, taking only about 60,000 tonnes or about 10 per cent of beef production. Accordingly, an export market for about 90 per cent of our beef product must be found.

2.17 There was a relatively heavy reliance on Intervention purchasing in Ireland in the 1980's and over 30% of steer beef was purchased for Intervention in the years 1983 to 1987. Moreover, the figure increased to over 70% from 1990 to 1992. However, there was no intake in 1994 or 1995 due to better market conditions. Difficulties in Europe caused by the BSE scare in 1996 resulted in some resumption of Intervention purchasing with over 16% of steer slaughterings purchased in 1996 and 1997. With improved access to continental and Third Country markets, Intervention intake dropped to 5% for 1998 and 3% for 1999, with no intake in 2000.

2.18 Following the renewed BSE scare on the Continent in late 2000, and consequent marketing difficulties in Europe and Third Countries, Ireland had to rely heavily on the

removal of product from the market in 2001. In addition to 8,000 tonnes of steer beef bought for Intervention, almost 91,000 tonnes of carcass beef of mixed-sex category was removed under the Purchase for Destruction Scheme and a further 61,000 tonnes of mainly cow beef was similarly removed under the Special Purchase Scheme.

2.19 Irish beef exports were valued at €1.28 billion in 2003, which represents an increase of over seven per cent on the previous year. The volume of exports increased by 9 per cent. Almost 85 per cent of beef exports were within the EU, compared to 50 per cent in 2000. Irish beef exports to the Continental European market increased by almost 30 per cent to 150,000 tonnes, due largely to the fact that the EU market was less than self sufficient for the first time in almost 25 years. The principal growth was evident in Italy, France and Holland.

2.20 Exports to the UK showed further growth in 2003 to reach 265,000 tonnes, which is equivalent to 53 per cent of total beef exports. The increase was achieved despite the euro strengthening by eight per cent against sterling during the year. Beef exports to International markets were marginally lower at 85,000 tonnes, reflecting an increasingly competitive global market for beef. The Egyptian market re-opened for Irish beef towards the end of the year. Full details of beef exports and intervention intake are in Annex 4.

## ANNEX 3

# Role of Agriculture and the Food Industry in the Irish Economy

2002	Primary Agriculture	Agri-Food Sector <sup>1</sup>
% of GDP at factor cost (est.)	3.0%	8.4% <sup>2</sup>
% of employment	6.5%	9.5%
% of exports (est.)	3.8%	7.1%

### Land Usage

- The land area of Ireland is 6.9million hectares, of which 4.4million hectares is used for agriculture or about 64% of total land area and 650,000 hectares for forestry or about 9.4% of total land.
- 80% of agricultural area is devoted to grass (silage, hay and pasture), 11% to rough grazing and 9% to crop production.
- Average land price per hectare in 2002 was €13,674. Average land price in the first quarter of 2003 was €13,455, 5.8% below the first quarter in 2002 and 2.5% above the fourth quarter of 2002.
- Beef and milk production currently account for 56% of agricultural output at producer prices.

### Farm Structure and Numbers

Year		Nos.
2002*	Farm Holdings	136,500
2002*	Average Farm Size	32.0 Hectares
2002*	Family Farm Holders by age	13% <35; 41% over 55
2002*	Total Number working on farms, full and part-time	240,100
2002*	Total Labour Input incl. non-regular workers (AWUs)	158,100
2003	Employment in agriculture (ILO definition) <sup>3</sup>	108,200

### Livestock Numbers and Land Use, Self-sufficiency and Exports

Livestock Numbers December 2002		Irish Self-sufficiency in selected agriculture produce, 2002		Exports of Selected Agricultural Produce, 2002 * (excl. value of export refunds)	
	<b>000 Head</b>				€m
Cattle	6,332.8	All Meat	273%	<b>Total Agri-Food, Drinks &amp; Tobacco</b>	<b>6,751.0</b>
Sheep	4,828.5	Beef	820%	<i>of which</i>	
Pigs	1,781.5	Pigmeat	163%	Live Animals	208.9
Poultry	13,208.4	Sheepmeat	303%	Beef	1,013.6
<b>Area under certain crops June 2003</b>		Poultrymeat	101%	Pigmeat	289.0
		Butter	1016 %	Sheepmeat	167.5
	<b>'000 Ha</b>	Cheese	551%	Poultrymeat	230.6
Cereals	304.1	Milk Powder	901%	Milk Products & Casein	1,111.4
Potatoes	15.0	Cereals *	88%	<i>of which</i>	
Sugar Beet~	31.3			Butter	319.1
~2002		*2001/2002		Cheese	356.7
				Cereals & Cereal preps	258.3
*Provisional Source: CSO					

<sup>1</sup> Agri-food includes primary agriculture, food, drinks and tobacco

<sup>2</sup> GVA in food, drinks and tobacco is at market prices –2002 is early estimate

<sup>3</sup> Persons employed in agriculture is based on the CSO's Quarterly National Household Survey (second quarter 2003). It covers people who identified agriculture as their primary source of income in the week preceding the survey.

## ANNEX 4

### Irish Beef Exports 1998-2003 '000 Tonnes (carcase wt.)

	1998	1999	2000	2001	2002	2003
<b>TOTAL</b>	<b>510</b>	<b>555</b>	<b>495</b>	<b>345</b>	<b>445</b>	<b>500</b>
Of which to:						
<b>Int. Mkts</b>	<b>295</b>	<b>310</b>	<b>250</b>	<b>55</b>	<b>90</b>	<b>85</b>
- Russia	52	33	7	46	83	75
- Egypt	120	155	150	0	0	1
- Other	123	122	93	9	7	9
<b>Cont. EU</b>	<b>130</b>	<b>150</b>	<b>135</b>	<b>70</b>	<b>110</b>	<b>150</b>
- France	45	50	40	13	16	24
- Italy	28	32	30	11	22	35
- Holland	25	32	30	25	30	32
- Scandinavia	22	25	24	12	30	35
- Other	10	11	11	9	12	24
<b>United Kingdom</b>	<b>85</b>	<b>95</b>	<b>110</b>	<b>220</b>	<b>245</b>	<b>265</b>

## EU Intervention Purchases 1992-2001 (tonnes product weight)

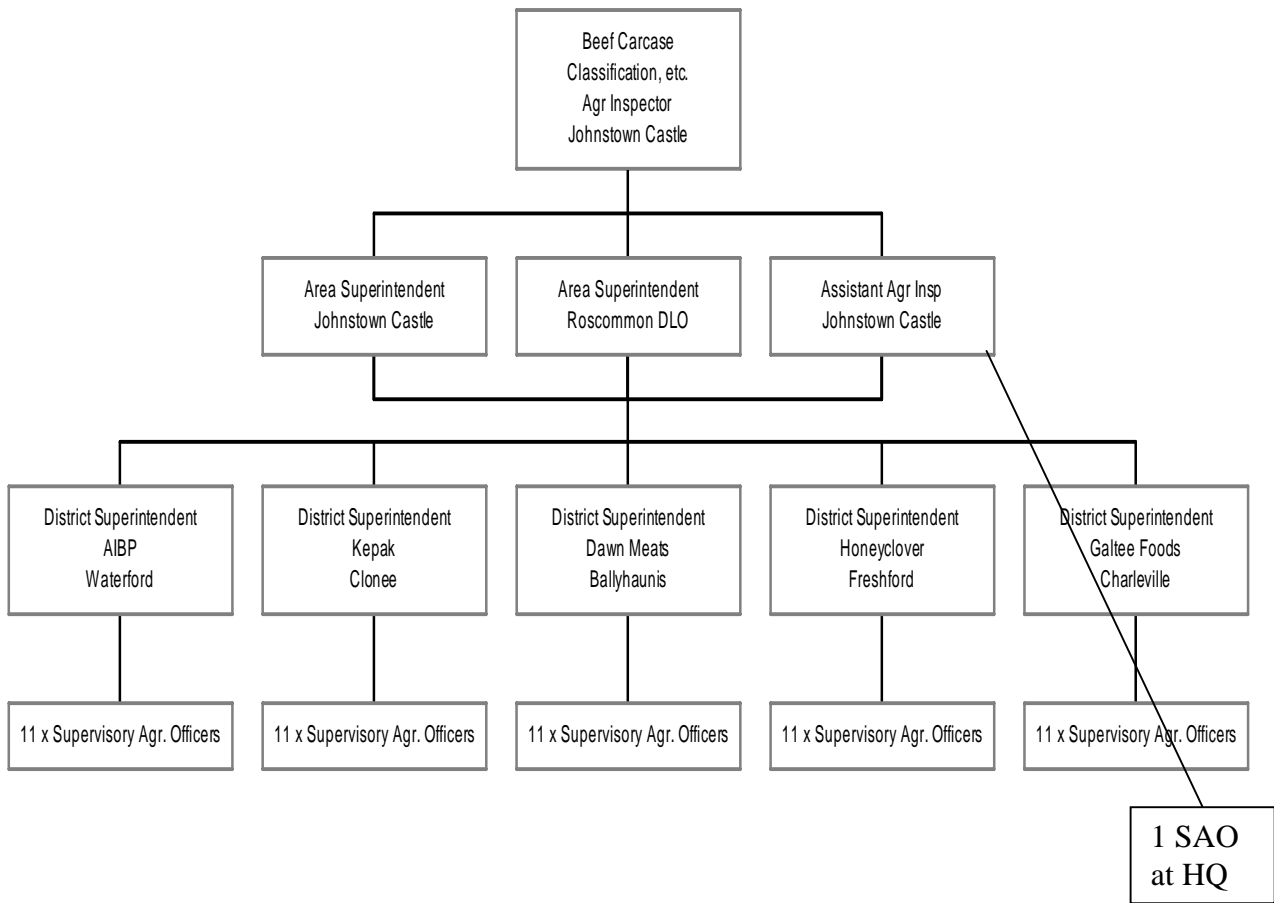
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Belgium	2,076	28	-	-	1,807	1,270	-	-	-	279
Denmark	42,162	18,530	-	-	7,805	6,286	-	-	-	967
Germany	191,451	41,745	-	-	117,605	62,172	-	-	508	55,656
Greece	-	-	-	-	-	-	-	-	-	-
France	213,790	24,702	-	-	95,469	19,502	-	-	1,101	75,471
Irish Republic	246,291	58,540	-	-	51,903	51,000	16,000	8,313	-	8,024
Italy	75,659	-	-	-	27,616	7,024	-	-	-	37,361
Luxembourg	-	-	-	-	-	-	-	-	-	-
Netherlands	924	13	-	-	2,334	163	-	-	40	365
United Kingdom	101,845	21,641	-	-	64,143	74,075	11,031	1,079	-	-
Spain	15,347	-	-	-	33,560	14,753	-	-	160	61,256
Portugal	-	-	-	-	1,815	-	-	-	-	-
Austria	-	-	-	-	10,725	3,422	-	-	-	8,478
Finland	-	-	-	-	107	138	-	-	-	-
Sweden	-	-	-	-	147	161	-	-	-	-
<b>EU</b>	<b>889,545</b>	<b>165,199</b>	<b>-</b>	<b>-</b>	<b>415,036<sup>1</sup></b>	<b>239,966<sup>2</sup></b>	<b>27,031<sup>3</sup></b>	<b>9,392<sup>3</sup></b>	<b>1,809</b>	<b>247,857</b>

<sup>1</sup>Includes 163,00 tonnes for boning prior to storage, 64,000 tonnes of which in the UK. <sup>2</sup>Includes 132,000 tonnes for boning, 74,000 tonnes of which in the UK.

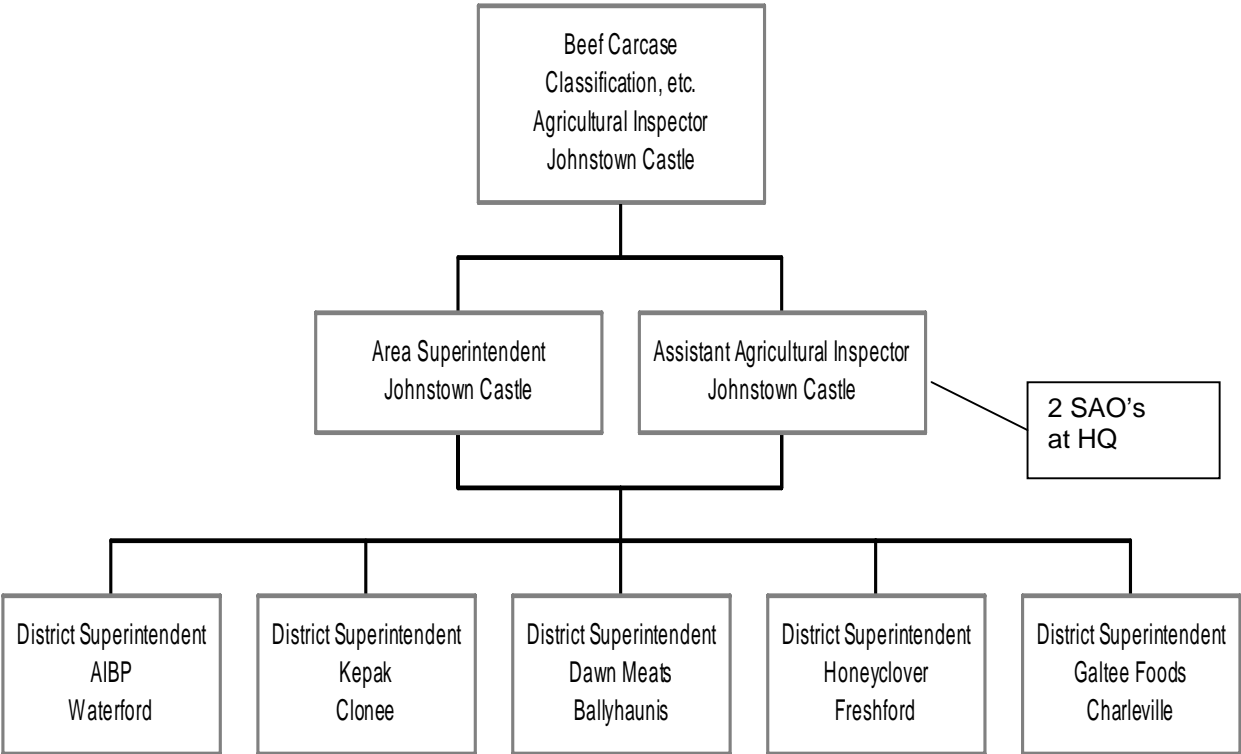
<sup>3</sup>All for boning

# ANNEX 5

## Beef Carcase Classification Staffing Structure at present



# Recommended Future Staffing Structure



## ANNEX 6

### Description of Sex Categories

Category	Code	Description
Young Bull	A	Carcases of uncastrated young male bovine animals of less than two years of age, verified on the basis of the information available in the bovine animal identification and registration system established in each Member State.
Bull	B	Carcases of other uncastrated male bovine animals.
Steer	C	Carcases of castrated male bovine animals.
Cow	D	Carcases of female bovine animals that have calved.
Heifer	E	Carcases of other female bovine animals.

# ANNEX 7

## Description of Conformation Classes

Development of carcase profiles, in particular the essential parts (round, back, and shoulder).

Class	Description		
E Excellent	All profiles convex to superconvex; exceptional muscle development	Round:	very rounded; topside spreads markedly over the symphysis (symphysis pelvis)
		Back:	wide and very thick, up to the shoulder; rump very rounded
		Shoulder:	very rounded
U Very Good	Profiles on the whole convex; very good muscle development	Round:	rounded; topside spreads over the symphysis
		Back:	wide and thick up to the shoulder; rump rounded
		Shoulder:	Rounded
R Good	Profiles on the whole straight; good muscle development	Round:	well developed; topside and rump are slightly rounded
		Back:	still thick but less wide at the shoulder
		Shoulder:	fairly well developed
O Fair	Profiles straight to concave; average muscle development	Round:	average development to lacking development
		Back:	average thickness to lacking thickness; rump; straight profile
		Shoulder:	average development to almost flat
P+ Poor	All profiles concave; poor muscle development	Round:	elongated and poorly developed
		Back:	narrow and thin
		Shoulder:	flat, poorly fleshed, spina of the scapula evident
P Very Poor	All profiles very concave; very poor muscle development	The round, back and shoulder are very poorly developed with the outlines of many bones apparent through the thin flesh covering	
P- Extremely Poor	All profiles extremely concave; extremely poor muscle development	Little or no flesh covering on the round, back and shoulder. All the bones of the skeleton are very apparent	

## ANNEX 8

### Description of Fat Classes

Class	Description of amount of fat on the outside of carcase	Description of amount of fat in the thoracic cavity of carcasses
1 Low	None up to low fat cover	No fat
2 Slight	Slight fat cover, flesh visible almost everywhere	Intercostal muscle clearly visible
3 Average	Flesh, with the exception of the round and shoulder, almost everywhere covered with fat	Slight deposits of fat but intercostal muscles still visible
4L Above average	Flesh covered with fat, but still partly visible on the round and shoulder; seams of fat prominent on the round	Distinctive fat deposits; intercostal muscles may be infiltrated with fat
4H High	Flesh covered with fat, but small areas partly visible on the round, back and shoulder; seams of fat very prominent on the round	Prominent fat deposits; intercostal muscles may be infiltrated with fat
5 Very high	Entire carcase covered with; the round is almost completely covered with fat, so that the seams of fat are no longer clearly visible	Heavy fat deposits; intercostal muscles infiltrated with fat

# ANNEX 9

## EU Carcase Dressing Specification

1. The following parts shall be removed from the body before the carcase is weighed:
  - (1) the head, separated at the atlanto-occipital joint;
  - (2) the hind feet, separated at the hock joint between the tarsal and the metatarsal bones;
  - (3) the fore feet, separated at the knee joint between the carpal and the metacarpal bones;
  - (4) the hide and the ears;
  - (5) the tail, at the junction between the first and the second coccygeal vertebrae;
  - (6) the alimentary canal, from the oesophagus to the anus, together with the fats adhering thereto;
  - (7) the genito-urinary organs, and in males, the codfat, and in females, the mammary tissue;
  - (8) the kidneys, the kidney fat and channel fat, and the large blood vessels attached to the vertebrae;
  - (9) the lungs, heart and trachea (the pluck); the liver, the thymus glands (the sweetbreads); the spleen; the pancreas; the pillars of the diaphragm (the thick skirt); the diaphragm (the thin skirt);
  - (10) the fat in the thoracic cavity on the internal surface of the sternum or brisket-bone;
  - (11) the jugular vein and the adjacent fat, with the sterno-cephalicus muscle remaining intact on the carcase;
  - (12) the spinal cord;
  - (13) the tut fat, that is, the fat lying in the ischio-rectal fossae;
  - (14) the fat on the inside of the topside;
  - (15) any parts or tissues removed at the direction of the veterinary examiner.
  
2. There shall be no trimming of external fat before the carcase is weighed.

# ANNEX 10

## Staff Costs

Year	Staff in BCC	Grade	Salary	Allowance	Overtime	Travel & Subs	TOTAL
1998	52	Supervisory Agricultural Officer	€1,483,300				
	5	District Superintendent	€163,900				
	3	Area Superintendent	€114,500				
		<b>Total</b>	<b>€1,761,700</b>	<b>€122,700</b>	<b>€207,000</b>	<b>€381,100</b>	<b>€2,472,500</b>
1999	52	Supervisory Agricultural Officer	€1,535,700				
	5	District Superintendent	€169,700				
	3	Area Superintendent	€118,500				
		<b>Total</b>	<b>€1,823,900</b>	<b>€127,000</b>	<b>€360,000</b>	<b>€412,500</b>	<b>€2,723,400</b>
2000	61	Supervisory Agricultural Officer	€1,977,200				
	5	District Superintendent	€186,200				
	2	Area Superintendent	€86,700				
		<b>Total</b>	<b>€2,250,100</b>	<b>€145,400</b>	<b>€216,000</b>	<b>€403,400</b>	<b>€3,014,900</b>
2001	58	Supervisory Agricultural Officer	€2,023,000				
	5	District Superintendent	€200,400				
	2	Area Superintendent	€93,300				
		<b>Total</b>	<b>€2,316,700</b>	<b>€154,100</b>	<b>€213,000</b>	<b>€415,000</b>	<b>€3,004,800</b>
2002	56	Supervisory Agricultural Officer	€2,023,098				
	5	District Superintendent	€207,550				
	2	Area Superintendent	€95,427				
		<b>Total</b>	<b>€2,326,075</b>	<b>€67,600</b>	<b>€142,486</b>	<b>€434,163</b>	<b>€2,970,324</b>

*Salaries calculated on max. of salary scale*

# ANNEX 11

## An Example of Classification Results as published

<b>YOUNG BULLS 2003 (3rd Qtr)</b>							<b>Average Weight 323.7 kg</b>	
	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>	<b>Total</b>
<b>1</b>	0.3	1.9	2.5	1.3	0.6	0.2	0.1	<b>6.9</b>
<b>2</b>	0.6	12.8	9.9	4.0	0.7	0.1	0.0	<b>28.1</b>
<b>3</b>	0.4	25.3	17.5	7.3	1.0	0.0	0.0	<b>51.5</b>
<b>4L</b>	0.0	6.7	5.0	0.4	0.0	0.0	0.0	<b>12.2</b>
<b>4H</b>	0.0	0.6	0.7	0.0	0.0	0.0	0.0	<b>1.3</b>
<b>5</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>
<b>Total</b>	<b>1.4</b>	<b>47.3</b>	<b>35.5</b>	<b>13.0</b>	<b>2.4</b>	<b>0.3</b>	<b>0.1</b>	<b>100</b>
<b>OLD BULLS 2003 (3rd Qtr)</b>							<b>Average Weight 439.6 kg</b>	
	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>	<b>Total</b>
<b>1</b>	0.4	11.2	13.4	10.8	3.0	0.4	0.1	<b>39.4</b>
<b>2</b>	0.4	10.9	14.3	9.5	1.6	0.0	0.0	<b>36.6</b>
<b>3</b>	0.3	5.6	8.1	3.8	0.5	0.0	0.0	<b>18.3</b>
<b>4L</b>	0.1	1.1	1.7	0.4	0.0	0.0	0.0	<b>3.3</b>
<b>4H</b>	0.0	0.6	1.1	0.1	0.0	0.0	0.0	<b>1.8</b>
<b>5</b>	0.0	0.3	0.3	0.1	0.0	0.0	0.0	<b>0.6</b>
<b>Total</b>	<b>1.1</b>	<b>29.6</b>	<b>39.0</b>	<b>24.6</b>	<b>5.1</b>	<b>0.4</b>	<b>0.1</b>	<b>100</b>
<b>STEERS 2003 (3rd Qtr)</b>							<b>Average Weight 336.9 kg</b>	
	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>	<b>Total</b>
<b>1</b>	0.0	0.0	0.1	0.2	0.1	0.1	0.0	<b>0.6</b>
<b>2</b>	0.0	0.4	2.0	1.4	0.7	0.0	0.0	<b>4.6</b>
<b>3</b>	0.0	3.4	19.7	13.2	2.7	0.0	0.0	<b>39.0</b>
<b>4L</b>	0.0	2.9	23.9	14.6	0.8	0.0	0.0	<b>42.1</b>
<b>4H</b>	0.0	0.7	8.3	3.5	0.0	0.0	0.0	<b>12.5</b>
<b>5</b>	0.0	0.0	0.7	0.3	0.0	0.0	0.0	<b>1.1</b>
<b>Total</b>	<b>0.0</b>	<b>7.5</b>	<b>54.8</b>	<b>33.3</b>	<b>4.3</b>	<b>0.1</b>	<b>0.0</b>	<b>100</b>
<b>COWS 2003 (3rd Qtr)</b>							<b>Average Weight 292.3 kg</b>	
	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>	<b>Total</b>
<b>1</b>	0.0	0.0	0.1	0.3	1.4	3.9	2.9	<b>8.6</b>
<b>2</b>	0.0	0.0	0.2	1.4	4.2	2.2	0.1	<b>8.2</b>
<b>3</b>	0.0	0.1	1.1	6.5	8.4	0.8	0.0	<b>17.0</b>
<b>4L</b>	0.0	0.2	3.0	17.6	9.0	0.2	0.0	<b>30.0</b>
<b>4H</b>	0.0	0.3	3.6	14.6	3.2	0.0	0.0	<b>21.7</b>
<b>5</b>	0.0	0.1	3.7	10.0	0.7	0.0	0.0	<b>14.5</b>
<b>Total</b>	<b>0.0</b>	<b>0.7</b>	<b>11.8</b>	<b>50.3</b>	<b>27.0</b>	<b>7.1</b>	<b>3.1</b>	<b>100</b>
<b>HEIFERS 2003 (3rd Qtr)</b>							<b>Average Weight 269.6 kg</b>	
	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>	<b>Total</b>
<b>1</b>	0.0	0.0	0.2	0.3	0.3	0.1	0.0	<b>0.9</b>
<b>2</b>	0.0	0.4	1.7	1.2	0.3	0.0	0.0	<b>3.7</b>
<b>3</b>	0.0	2.5	18.5	8.7	0.8	0.0	0.0	<b>30.7</b>
<b>4L</b>	0.0	2.3	24.6	12.1	0.5	0.0	0.0	<b>39.6</b>
<b>4H</b>	0.0	0.9	12.9	6.8	0.1	0.0	0.0	<b>20.7</b>
<b>5</b>	0.0	0.1	2.4	1.8	0.0	0.0	0.0	<b>4.4</b>
<b>Total</b>	<b>0.0</b>	<b>6.3</b>	<b>60.4</b>	<b>31.0</b>	<b>2.0</b>	<b>0.2</b>	<b>0.0</b>	<b>100</b>

## An Example of Individual Plant Classification Results (3<sup>rd</sup> Quarter 2003)

	U2	U3	U4L	U4H	U5	R2	R3	R4L	R4H	R5	O2	O3	O4L	O4H	O5	P+3	P+4L	P+4H
<b>KILDARE CHILLING COMPANY</b>	0.0	1.2	1.6	0.6	0.1	1.9	14.6	23.1	8.3	1.7	2.2	15.1	16.7	3.7	0.5	5.2	1.3	0.0
<b>SLANEY MEATS BUNCLODY</b>	0.9	1.7	1.2	0.1	0.0	5.2	24.3	28.1	5.3	0.8	1.6	12.0	13.4	2.5	0.3	1.5	0.4	0.0
<b>FAIR OAKS BAGENALSTOWN</b>																		
<b>AIBP WATERFORD</b>	0.0	0.4	0.1	0.0	0.0	3.4	17.9	19.1	5.5	1.3	3.4	18.8	21.5	3.8	0.5	2.5	0.4	0.1
<b>FAIR OAKS FOODS CLONMEL</b>																		
<b>AIBP CAHIR</b>	0.0	0.3	0.3	0.0	0.0	1.2	18.8	24.2	6.3	0.4	0.8	17.9	21.5	3.7	0.3	2.6	0.7	0.0
<b>DAWN MEATS MIDLETON</b>	0.2	1.9	0.8	0.1	0.0	1.3	16.1	20.2	7.2	0.6	1.4	19.1	19.6	4.8	0.4	3.8	0.5	0.0
<b>GALTEE MEATS CHARLEVILLE</b>	0.2	1.1	2.2	0.3	0.1	1.7	10.1	15.5	9.7	0.9	2.2	16.3	23.4	7.0	1.0	3.9	1.2	0.0
<b>AIBP RATHKEALE</b>	0.2	0.9	0.7	0.2	0.0	0.9	15.2	18.5	6.0	0.7	1.3	20.2	22.8	6.8	0.3	2.6	1.5	0.1
<b>ASHBOURNE MEATS ROSCREA</b>	0.0	1.4	0.8	0.2	0.1	2.7	15.7	19.5	9.6	0.8	2.9	14.5	17.3	4.5	0.1	3.1	1.3	0.1
<b>MEADOW MEATS RATHDOWNEY</b>	0.2	4.2	4.5	0.8	0.0	0.5	18.1	35.5	9.5	1.1	0.4	8.9	12.2	1.8	0.1	1.4	0.3	0.0
<b>AIBP NENAGH</b>	0.1	2.5	3.0	0.6	0.0	0.6	22.5	23.7	9.0	0.4	1.0	18.3	12.5	3.0	0.1	1.8	0.1	0.0
<b>DAWN BALLAGHADERREEN</b>	0.6	11.4	9.6	2.1	0.1	1.9	25.6	27.1	6.4	0.3	0.4	6.3	3.7	1.4	0.0	1.8	0.2	0.0
<b>DAWN BALLYHAUNIS</b>	2.0	7.5	5.2	0.9	0.1	2.6	21.9	27.5	8.0	0.6	1.2	8.3	8.5	2.3	0.2	1.4	0.4	0.1
<b>DMP CARRIGANS DONEGAL</b>	0.9	12.1	8.8	3.6	0.2	1.3	25.3	19.4	17.3	1.1	0.3	3.8	2.7	1.9	0.3	0.5	0.1	0.0
<b>AIBP CLONES</b>	0.4	5.4	4.6	0.9	0.0	1.9	22.2	23.2	8.2	0.4	1.2	12.2	11.4	2.8	0.2	3.0	0.9	0.0
<b>LIFFEY MEATS BALLYJAMESDUFF</b>	0.4	3.8	3.0	0.7	0.1	2.4	23.4	26.9	7.7	0.5	1.3	8.5	9.3	3.2	0.1	3.9	1.5	0.2
<b>KEPAK CLONEE</b>	0.4	2.2	2.1	0.7	0.0	1.4	17.1	21.2	9.4	0.6	1.2	12.1	16.1	6.0	0.5	6.1	1.7	0.1
<b>KEPAK WATERGRASSHILL CORK</b>	0.0	1.4	1.6	0.4	0.0	1.3	14.6	21.3	9.0	0.9	1.5	20.4	20.4	3.5	0.1	2.6	0.5	0.0
<b>AIBP BANDON</b>	0.1	0.6	0.7	0.3	0.0	1.5	10.8	13.8	8.3	0.8	1.6	23.1	24.7	7.0	0.4	3.3	1.5	0.2
<b>DAWN MEATS GRANNAGH</b>	0.1	0.8	0.3	0.0	0.0	3.4	17.5	23.7	6.2	0.2	3.7	15.7	19.0	3.9	0.5	2.2	1.1	0.0
<b>HONEYCLOVER FRESHFORD</b>																		
<b>KEPAK ATHLEAGUE</b>	1.2	6.3	4.4	1.8	0.1	2.9	24.9	26.5	9.8	0.7	0.8	8.2	7.5	2.0	0.2	1.5	0.2	0.0
<b>MOYVALLEY MEATS, BROADFORD</b>	0.3	3.6	4.9	1.1	0.0	1.5	18.5	29.5	9.7	0.8	1.2	8.2	11.5	3.0	0.4	2.5	1.0	0.1
<b>SEAN DUFFY EXPORTS GORT</b>	0.8	2.6	1.8	0.1	0.0	2.3	22.1	28.7	12.6	1.1	0.8	7.8	12.9	4.4	0.6	0.7	0.1	0.0
<b>JENNINGS BALLINROBE</b>	0.5	2.3	2.8	1.0	0.0	2.9	27.2	21.4	6.3	0.2	2.1	14.5	13.5	2.4	0.0	1.5	0.5	0.0
<b>NEW GRANGE MEATS, NAVAN</b>	0.8	5.2	3.2	0.9	0.0	2.6	22.8	25.3	6.3	0.5	0.6	9.7	15.3	2.0	0.2	2.3	1.2	0.1
<b>EXCEL MEATS KILBEGGAN</b>	0.3	4.2	3.2	0.6	0.0	1.2	26.0	32.0	10.1	0.6	0.1	6.4	10.9	2.6	0.2	0.7	0.5	0.0
<b>DND MEATS, MIDLETON</b>	0.0	0.2	0.7	0.0	0.0	0.2	12.7	15.1	3.5	0.7	2.8	26.3	23.0	5.7	0.7	5.7	1.5	0.0
<b>ALL FACTORIES</b>	0.4	3.4	2.9	0.7	0.0	2.0	19.7	23.9	8.3	0.7	1.4	13.2	14.6	3.5	0.3	2.7	0.8	

# ANNEX 12

## An Example of an EU Weekly “Dead Weight” Price Report

**Week Comm.**

**13/10/2003**

### MEMBER STATE: IRELAND

CATEGORY	CLASS	PRICE (€euro/100kg)
A	U2	247.44
A	U3	258.03
A	R2	226.11
A	R3	238.86
A	O2	209.83
A	O3	212.54
B	R3	156.60
C	U2	228.64
C	U3	230.78
C	U4	229.86
C	R3	225.08
C	R4	224.85
C	O3	214.58
C	O4	214.50
D	R3	172.66
D	R4	175.87
D	O2	147.82
D	O3	160.55
D	O4	168.81
D	P2	110.01
D	P3	144.50
E	U2	234.00
E	U3	236.59
E	R2	223.95
E	R3	226.61
E	R4	226.79
E	O2	207.05
E	O3	211.28
E	O4	214.34

## ANNEX 13

### An example of a Weekly Industry Price Report W/C10/11/03.

	U2	U3	U4L	U4H	R2	R3	R4L	R4H	R5	O2	O3	O4L	O4H	O5	P+3	P+4L
KILDARE CHILLING COMPANY		230.22	229.77		224.49	226.41	226.87	226.94	225.09	216.51	216.46	217.81	218.60		203.19	
SLANEY MEATS BUNCLODY	239.33	241.51	240.01		230.48	230.96	231.36	231.16		219.61	220.55	222.81	222.89			
FAIR OAKS BAGENALSTOWN																
AIBP WATERFORD					229.94	233.10	229.18	228.02		217.47	218.60	218.59	217.74		209.71	
FAIR OAKS FOODS CLONMEL					225.98	227.25	226.20	222.69	225.31	210.13	215.99	213.31	216.24		205.21	201.78
AIBP CAHIR						231.23	231.20	231.32			220.60	220.61	219.56			
DAWN MEATS MIDLETON						226.40	226.62	226.46		216.38	216.75	217.66	218.16		204.67	192.50
GALTEE MEATS CHARLEVILLE		233.45				229.69	228.42	227.68		205.76	216.52	217.32	215.41		194.98	197.31
AIBP RATHKEALE		235.30				229.50	228.29	227.19			216.61	217.16	215.25		201.98	
ASHBOURNE MEATS ROSCREA			228.09			225.73	225.52	225.62	225.67		213.22	214.13	213.28			
MEADOW MEATS RATHDOWNEY		234.47	232.19	232.14		226.87	227.52	226.64	227.24		215.63	215.63	218.22			
AIBP NENAGH		233.71	234.92	234.02		229.60	229.52	230.01			219.19	218.77				
DAWN BALLAGHADERREEN	234.29	231.41	230.13	230.91	225.06	225.59	225.46	225.73			215.46	216.54	217.77		209.30	
DAWN BALLYHAUNIS	228.45	229.83			222.44	221.94	221.72	221.24			212.45	212.00	210.51			
DMP CARRIGANS DONEGAL	236.31	241.76	235.43	236.51	227.35	235.06	231.18	231.08	229.49		224.92	222.37	223.65			
AIBP CLONES	229.27	234.08	232.94		222.44	228.02	228.28	227.21		211.85	216.33	217.97	217.81		201.54	
LIFFEY MEATS BALLYJAMESDUFF		233.82	233.50		225.84	228.48	228.26	225.31		205.02	216.45	216.99	217.68		202.53	203.93
KEPAK CLONEE		232.56	233.94			225.13	225.33	225.13		214.77	215.41	215.73	215.20		207.54	
KEPAK WATERGRASSHILL CORK						229.32	230.49	229.87		221.32	220.93	221.97			209.24	
AIBP BANDON					229.45	229.05	230.34	230.03		204.85	221.53	218.98	222.78			
DAWN MEATS GRANNAGH					228.92	229.95	229.87	228.21	224.47	217.26	219.02	216.98	218.68	217.71	200.15	
HONEYCLOVER FRESHFORD																
KEPAK ATHLEAGUE		230.37	230.95	231.89	221.11	223.79	224.33	224.67		212.78	216.68	217.38				
MOYVALLEY MEATS, BROADFORD		232.20	232.73	233.10		227.06	226.99	226.65			215.60	215.95	215.56			
SEAN DUFFY EXPORTS GORT					230.66	229.75	229.64	230.13			228.41	228.19				
JENNINGS BALLINROBE						227.90	227.68									
NEW GRANGE MEATS, NAVAN		235.33				228.26	228.98	229.67			217.28	218.73			198.53	
EXCEL MEATS KILBEGGAN		235.86	235.86			231.06	231.04	231.06			219.56	219.56				
DND MEATS, MIDLETON																
ALL FACTORIES		230.22	229.77		224.49	226.41	226.87	226.94	225.09	216.51	216.46	217.81	218.60		203.19	

# ANNEX 14

## Carcase Classification Results 1998 to 2002

### 14.1 STEERS

#### Carcase Weight

The downward trend since 1998 continued into 2002.

**Table 1** Steer Carcase weights (Kg Cold) 1998 to 2002

1998	-	343
1999	-	337
2000	-	340
2001	-	339
2002	-	334

#### Conformation

The slightly downward trend in quality of previous years was reversed, with an increase in the percentage of carcasses achieving the better grades.

**Table 2** Steer Conformation (%) 1998 to 2002

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>
<b>1998</b>	-	5.7	36.7	47.2	9.9	0.3	0.0
<b>1999</b>	-	6	38.9	47.5	7.3	0.3	0.0
<b>2000</b>	-	4.9	43.7	46.4	4.8	0.2	0.0
<b>2001</b>	-	3.3	43.4	48.3	4.8	0.2	0.0
<b>2002</b>	-	4.5	47.7	42.1	5.5	0.2	0.0

#### Fatness

There was a significant reduction in the % of Steers reaching fat classes 4H and 5, and a consequent increase in classes 2 and 3.

**Table 3** Steer Fatness (%) 1998 to 2002

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4L</b>	<b>4H</b>	<b>5</b>
<b>1998</b>	0.5	3.0	16.7	31.6	32.8	15.4
<b>1999</b>	0.9	3.9	19.1	33.4	30.3	12.4
<b>2000</b>	0.5	2.3	17.0	38.5	31.8	10.1
<b>2001</b>	0.5	2.8	17.9	39.3	30.8	8.9
<b>2002</b>	0.8	5.0	31.2	39.9	19.4	3.7

## 14.2 HEIFERS

### Carcase Weight

The downward trend of recent years continued in 2002.

**Table 4      Heifer carcase weights (Kg Cold) 1998 to 2002**

1998	-	279
1999	-	268
2000	-	267
2001	-	266
2002	-	265

### Conformation

The downward trend in quality of previous years was reversed with an increase in the percentage of carcasses achieving the better grades.

**Table 5      Heifer Conformation (%) 1998 to 2002**

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>
<b>1998</b>	0.1	4	40.8	47.3	6.6	1.1	0.1
<b>1999</b>	-	3.1	39.5	51.5	4.7	0.9	0.2
<b>2000</b>	-	2.5	40.3	53.7	2.9	0.5	0.1
<b>2001</b>	-	2.0	39.8	53.8	3.5	0.7	0.1
<b>2002</b>	0.1	3.7	49.6	43.5	2.7	0.4	0.1

### Fatness

There was a significant reduction in the % of Heifers reaching fat classes 4H and 5, and a consequent increase in the lower levels, particularly fat classes 2 and 3.

**Table 6      Heifer Fatness (%) 1998 to 2002**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4L</b>	<b>4H</b>	<b>5</b>
<b>1998</b>	2.4	3.6	12.6	26.4	33.1	21.9
<b>1999</b>	2.2	3.6	15.2	30.5	31.3	17.2
<b>2000</b>	1.6	2.8	13.3	35.3	32.9	14.1
<b>2001</b>	1.7	3.0	14.0	34.5	32.8	14.1
<b>2002</b>	1.4	4.4	24.8	37.7	24	7.6

## 14.3 COWS

### Carcase Weights

The trend of heavier weights in 2000 and 2001 continued in 2002.

**Table 7** Cow carcass weights (Kg Cold) 1998 to 2002

1998	-	278
1999	-	279
2000	-	286
2001	-	284
2002	-	284

### Conformation

Apart from the continued slight increase in the R grade, there was little change in the figures from previous years.

**Table 8** Cow Conformation (%) 1998 to 2002

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>
<b>1998</b>	-	0.2	3.4	44	35.6	11.1	5.7
<b>1999</b>	-	0.2	4.5	49.5	31.7	9.7	4.4
<b>2000</b>	-	0.3	5.5	56.2	27.9	7.3	2.8
<b>2001</b>	-	0.3	6.1	47.5	31.5	10.5	4.1
<b>2002</b>	-	0.4	7.3	46	30.2	11.3	4.8

### Fatness

There was a reduction in the % of Cows reaching fat classes 4H and 5, and a consequent increase in the fat classes 1, 2 and 3.

**Table 9** Cow Fatness (%) 1998 to 2002

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4L</b>	<b>4H</b>	<b>5</b>
<b>1998</b>	10.8	11.8	12.7	17.3	19.6	27.8
<b>1999</b>	10.6	10.8	12.9	18.3	19.9	27.5
<b>2000</b>	7.4	9.3	12.9	22.4	22.1	25.9
<b>2001</b>	10.1	11.6	13.5	20.9	19.4	24.4
<b>2002</b>	12.9	12.3	16.8	22	17.4	18.5

# ANNEX 15

## Price Differentials (cent/kg) 2001

### STEERS:

#### Price Differentials from R4L (cent/kg)

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>
<b>1</b>	-	-	-	-	-
<b>2</b>	-	-	-	-14.6	-
<b>3</b>	-	-	-0.3	-6.3	-22.9
<b>4L</b>	-	8.8	<b>0.0</b>	-5.3	-23.9
<b>4H</b>	-	-	-0.6	-6.7	-
<b>5</b>	-	-	-6.1	-11.8	-

### HEIFERS:

#### Price Differentials from R4L (cent/kg)

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>
<b>1</b>	-	-	-	-	-
<b>2</b>	-	-	-	-	-
<b>3</b>	-	-	-1.9	-10.4	-
<b>4L</b>	-	-	<b>0.0</b>	-8.3	-
<b>4H</b>	-	-	-1.3	-9.7	-
<b>5</b>	-	-	-11.8	-18.9	-

Sub-classes with less than 1%  
have been omitted

### COWS:

#### Price Differentials from O4L (cent/kg)

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>
<b>1</b>	-	-	-	-	-49.6	-54.7	-59.2
<b>2</b>	-	-	-	-	-33.3	-46.1	-
<b>3</b>	-	-	-	-3.8	-21.3	-	-
<b>4L</b>	-	-	-	<b>0.0</b>	-14.3	-	-
<b>4H</b>	-	-	6.9	1.0	-12.2	-	-
<b>5</b>	-	-	6.1	1.3	-12.2	-	-

## Price Differentials (cent/kg) 2002

### STEERS:

#### Price Differentials from R4L (cent/kg)

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>
<b>1</b>	-	-	-	-	-
<b>2</b>	-	-	-3.8	-11.5	-19
<b>3</b>	-	7.5	-0.6	-5.7	-15.7
<b>4L</b>	-	7.1	<b>0.0</b>	-4.3	-
<b>4H</b>	-	-	0.5	-3.7	-
<b>5</b>	-	-	-1.2	-5.7	-

### HEIFERS:

#### Price Differentials from R4L (cent/kg)

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>
<b>1</b>	-	-	-	-	-
<b>2</b>	-	-	-6.6	-22.3	-
<b>3</b>	-	-	-2.2	-11.8	-
<b>4L</b>	-	8.9	<b>0.0</b>	-8.7	-
<b>4H</b>	-	-	0.4	-7.7	-
<b>5</b>	-	-	-5.7	-13.1	-

Sub-classes with less than 1%  
have been omitted

### COWS:

#### Price Differentials from O4L (cent/kg)

	<b>E</b>	<b>U</b>	<b>R</b>	<b>O</b>	<b>P+</b>	<b>P</b>	<b>P-</b>
<b>1</b>	-	-	-	-	-77.1	-87.5	-92.0
<b>2</b>	-	-	-	-21.7	-50.3	-67.2	-
<b>3</b>	-	-	-	-5.7	-24.8	-	-
<b>4L</b>	-	-	4.3	<b>0.0</b>	-13.5	-	-
<b>4H</b>	-	-	5.6	2.4	-9.6	-	-
<b>5</b>	-	-	6.5	3.1	-8.8	-	-