

LTO DEPARTMENT OF BEEF CATTLE



Dutch Produced Beef, the Best Beef

A market research and marketing plan for the marketing of beef produced under higher animal welfare standards in the Netherlands

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Dutch produced beef, the best beef.

A market research and marketing plan for the marketing of quality beef produced under higher animal welfare standards in the Netherlands.

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“It takes many good deeds to build a good reputation, and only one bad one to lose it.”

- Benjamin Franklin

“Be good and tell it!”

- Guus Laeven, Federatie Vleesveestamboeken Nederland

Preface

The beef producers in the Netherlands can provide for 57 percent of the total demand in beef and beef products. This means that the Dutch market is depending on imports from all over the world to meet consumer demands. The largest beef importers for the Netherlands lay within the European Union. Countries such as Germany, Belgium, the United Kingdom and Ireland provide a large part of the additional products needed on the Dutch market.

While large supermarkets in the Netherlands such as Albert Heijn and Jumbo promote their imported products on their high level of animal welfare, concerns within the Dutch beef producing sector arise. The animal welfare practices in these countries are not meeting the standards used in the Netherlands. A concern that the department of LTO Beef Cattle wanted to investigate further in a marketing research, investigating the opportunities to promote beef produced in the Netherlands.

As a graduating student with an interest in beef production, I took this opportunity upon me to find the best strategies for the beef sector in the Netherlands to improve the marketing. The department of LTO Beef Cattle supported me throughout the entire research process, giving me the time, information and contacts that I needed for a successful completion of my thesis. Therefore I would like to thank Chairman Leon Moonen, members Jos Bolk and Henk Wiersma, advisors of the department Ed Neerincx and Christiaan Lenferink. With special thanks to the policy advisor of the department and my mentor during the internship period, Janet Bakker for excellent guidance and help with all issues that arose during this research.

My gratitude also goes out to Caroline van der Plas for giving me the opportunity to write several articles about my research for the Nieuwe Oogst and to the department of communication for giving me support on all issues concerning the communication of press releases and communication between several magazines and newspapers. I would also like to thank my coach at Van Hall Larenstein, Ben Rankenberg, for advice, support, and feedback throughout the writing of my thesis report.

A handwritten signature in black ink, appearing to read 'E. Daanje', with a stylized flourish extending from the end.

Ellen Daanje

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Summary

The Dutch beef sector is small spread out and diverse. They are depending on imports to meet consumer demands. Almost half of all beef is imported from countries like Germany, Belgium, the United Kingdom (UK), and Ireland. Large supermarkets prefer imported beef over Dutch produced beef because they demand a constant quality level in large quantities to spread their risks and to ensure availability, especially during promotions. Signals from the sector indicated that animal welfare requirements in the Netherlands are much higher than those used in the importing countries. Still large supermarkets promote their imported products. This leads to a difficult competitive position for the Dutch beef producers. *How can Dutch beef, produced under higher animal welfare standards, be better marketed?* That is the question that the Department of LTO Beef Cattle wanted answered.

In a marketing analysis all European and national legislation on animal welfare was compared to find out the differences in requirements between the Netherlands and importing countries. An inventory of the requirements of Dutch quality labels used in the supermarkets was analyzed and compared to the requirements of the most important quality labels in each importing country. Consumer trends and demands were also analyzed. Based on this information a questionnaire was issued on Twitter and Facebook to find out what the image of Dutch produced beef was under consumers and the most important aspects of animal welfare. Supermarkets were interviewed to find out what their demands are and if Dutch beef would be an option for them. All this information was used to find out the attractiveness of the market and to analyze strengths, weaknesses, opportunities, and threats of the sector.

According to national legislation a (bull) calf may be castrated or disbudded without anesthetics in Germany, the UK, and Ireland. In the Netherlands and Belgium this is always done using anesthetics. Larger differences were found in the animal welfare requirements of each importing country. *Beef and Lamb Quality Assurance Scheme* in Ireland, *Red Tractor* and *Freedom Foods* in the UK, *Meritus* in Belgium, and *QS-Qualitätssicherung* in Germany are the most important beef quality labels in the importing countries. These are compared to the two most important beef labels in the Netherlands. These are *Beter Leven ster 1* and *Scharrelrundvlees*. The Dutch labels have superior animal welfare requirements that exceed those of the importing countries. *Beter Leven ster 1* and *Scharrelrundvlees* are the only labels that require a minimum suckling period for calves, limit transportation distance and time, have a required grazing period, and are the most frequently audited labels. On top of that *Scharrelrundvlees* prohibits castration and dehorning. The only positive aspect that the Netherlands can learn from is that all important beef labels of importing countries are accredited under their national accreditation institute. This is not the case for any Dutch label.

The questionnaire showed that Dutch produced beef has a good image. It is seen as a product of good quality that is healthy and raised under good animal welfare requirements. Despite the good image Dutch produced beef is barely promoted within the retail sector. Only smaller supermarkets such as Boni, Dekamarkt, Dirk van den Broek, and different butchers sell Dutch produced beef. Large supermarkets prefer imported beef. Current trends show that most beef is sold in the supermarkets. This is something that should be considered in the marketing of Dutch beef. Even though animal welfare is important in today's society consumers choose quality, but more importantly, price over animal welfare. This is also shown in the questionnaire. Consumption patterns are changing. Cheaper meat products are preferred over quality beef because it is easier and faster to prepare. Still consumers are critical when it comes to animal welfare. They desire more transparency from the sector on how beef is produced.

With this information a symposium on ‘Dutch produced beef’ was organized in Elst (Gelderland). The goal was to inform participants of the sector, retail, and consumers about the superior animal welfare practices, the opportunities in the market and to formulate a strategy for the sector. The participants agreed that the sector should become more transparent towards consumers. Using a label as *Beter Leven kenmerk (BLK)* is not an option because it excludes a large part of the sector (double muscled breeds) because of the structural C-sections. Another factor not included in *BLK* is the sustainability of beef production. The focus for the future of the beef sector should lay in the ‘regional’ marketing. The Dutch beef sector is unique because of its diversity; it has superior animal welfare standards and a good image. This can be used in the communication towards consumers.

As a result of the symposium and the outcome of this research two main goals were set by the Department of LTO Beef Cattle. They believe that they can:

1. Change the sale of beef in small supermarkets from imported beef to Dutch beef only by 2018.
2. Increase the margins for primary producers with 10 percent by 2018.

To be able to reach these goals the marketing of Dutch produced beef should focus on the end product. This is a tangible piece of meat that can be prepared by the consumer. This beef, which is produced under high animal welfare standards, should be of a quality beef breed. The animal should be at least fattened and slaughtered in the Netherlands (at least 2xNL). This beef should be identified with a quality label that is accredited to guarantee superior animal welfare and sustainably to increase the transparency of the sector. ‘Less but Better’ is the philosophy that should be used in the communication towards consumers. Accepting the changing consumption patterns and promoting Dutch beef as a better piece of beef. Consumers should be educated and informed on preparation methods through recipe’s and tips & tricks. These should be posted on social media, magazines, be promoted by a famous chef, and in supermarkets. Transparency can be included in the marketing activities by informing consumers about open days, promoting bicycle and walking routes through pastures, organize excursions for primary schools, and promoting farm sales.

The plan of action can be summarized into seven short steps. These include:

1. Inventory the total production of quality beef and the total demand of small supermarkets.
2. Localize small supermarkets in each region and link them to the primary producers that are willing to produce under a new label.
3. Set up the entire chain for this line of production. Including slaughter houses, cutting plants, packing plants and wholesalers.
4. Develop a quality system that guarantees animal welfare and sustainability that is accredited under the *Raad van Accreditatie*.
5. Inventory all small supermarkets that might be willing to sell Dutch produced beef.
6. Convince the selected supermarkets of the benefits and qualities of Dutch produced beef.
7. Communication towards the consumer concerning animal welfare, quality, preparation methods, and a decent price.

Samenvatting

De Nederlandse Vleesveesector is klein, divers, en verspreid in veel kleine bedrijven. Ze zijn afhankelijk van import om aan de vraag van consumenten te voldoen. Bijna de helft van al het rundvlees wordt geïmporteerd. Dit komt voornamelijk uit Duitsland, België, de Verenigd Koninkrijk en Ierland. Grotere supermarkten geven de voorkeur aan geïmporteerd rundvlees. Dit omdat zij een continue kwaliteit eisen in grootte hoeveelheden. Ze willen hun risico spreiden en de beschikbaarheid garanderen, vooral tijdens reclame acties. De signalen uit de sector geven aan dat de eisen voor dierenwelzijn in Nederland veel hoger zijn dan de eisen in de importerende landen. Toch promoten grote supermarkten nog steeds hun geïmporteerde producten. Dit leidt tot een moeilijke concurrentiepositie voor de Nederlandse rundvlees producenten. *Hoe kan het Nederlandse rundvlees, dat geproduceerd is onder strengere dierenwelzijnsnormen, toch beter vermarkt worden?* Dat is de vraag die de Vakgroep LTO Vleesveehouderij wil beantwoorden.

Alle Europese en nationale wetgeving op het gebied van dierenwelzijnseisen van Nederland en de concurrerende importerende landen zijn vergeleken in een marketing analyse. Daarnaast zijn de kwaliteitseisen van alle Nederlandse rundvlees kwaliteitslabels die gebruikt worden in de supermarkten geïnventariseerd en vergeleken met de eisen van de belangrijkste kwaliteitslabels van de importerende landen. Ook zijn de consumenten vraag en trends geanalyseerd. Met behulp van deze informatie is er een consumenten enquête uitgegeven via Twitter en Facebook om te kijken wat het image van Nederlands geproduceerd rundvlees is en wat consumenten zien als de belangrijkste aspecten van dierenwelzijn. Ook zijn supermarkten geïnterviewd om te kijken wat hun eisen zijn en of Nederlands geproduceerd rundvlees een optie zou zijn voor de supermarkten. Deze informatie werd gebruikt om de aantrekkelijkheid van de markt te analyseren en om alle sterke punten, zwakke punten, kansen en bedreigingen van de sector te analyseren.

Volgens de nationale wetgeving in Duitsland, het Verenigd Koninkrijk en Ierland mag een (stier) kalf onverdoofd onthoofd en gecastreerd worden. In Nederland en België. Grotere verschillen in dierenwelzijn zijn te vinden in de eisen van de grootste kwaliteitslabels van de importerende landen. *Beef and Lamb Quality Assurance Scheme* in Ierland, *Red Tractor* en *Freedom Foods* in het Verenigd Koninkrijk, *Meritus* in België en *QS-Qualitätssicherung* in Duitsland zijn de grootste rundvlees labels. Wanneer deze vergeleken worden met de twee belangrijkste kwaliteitslabels in Nederland (*Scharrelrundvlees* en *Beter Leven ster 1*) dan hebben deze Nederlandse labels veel strengere kwaliteitseisen dan de labels uit importerende landen. *Beter Leven ster 1* en *Scharrelrundvlees* zijn de enige labels die een minimum zoogperiode voor kalveren, een limiet op transport afstand en tijd, een verplichte begrazingsperiode en ze hebben de meeste controles. Daarnaast is bij *Scharrelrundvlees* castratie en onthoornen verboden. Het enige positieve aspect van de kwaliteitslabels van de importerende landen is dat deze allemaal geaccrediteerd zijn bij het nationale accreditatie instituut. Dit is niet het geval voor alle Nederlandse kwaliteitslabels.

De enquête laat zien dat Nederlands geproduceerd rundvlees een goed image heeft onder de consumenten. Het is een kwaliteitsproduct dat gezond is en geproduceerd wordt onder goede dierenwelzijnseisen. Ondanks het goede imago van Nederlands rundvlees wordt er nog weinig mee gepromoot in de retail sector. Alleen kleinere supermarkten zoals Boni, Dekamarkt, Dirk van den Broek en verschillende slaggers promoten het Nederlands rundvlees. Grotere supermarkten kiezen vaak bewust voor geïmporteerd rundvlees. Consumenten kopen het meeste rundvlees in de supermarkten. Een belangrijke locatie voor de marketing van Nederlands rundvlees. Ondanks dat dierenwelzijn belangrijk is in de huidige maatschappij kiezen consumenten nog vaak kwaliteit, maar nog belangrijker, prijs boven dierenwelzijn. Dat is te zien in de uitslagen van de enquête. Consumptie patronen zijn

aan het veranderen. Goedkopere vleesproducten worden gekozen boven kwaliteitsrundvlees. Voornamelijk omdat het sneller en makkelijkere te bereiden is. Toch blijven consumenten wel kritisch over het dierenwelzijn. Ze wensen meer transparantie over hoe rundvlees wordt geproduceerd.

Met deze informatie was het symposium 'Nederlands rundvlees' in Elst (Gelderland) georganiseerd. Het doel van het symposium was om de deelnemers vanuit de sector, retail en consumenten te informeren over de uitstekende dierenwelzijnspraktijken, de kansen op de markt en om een strategie te kunnen formuleren voor de toekomst van de Nederlandse vleesveehouderij. De deelnemers waren het er unaniem mee eens dat de sector meer transparant moet zijn richting de consument. Het label *Beter Leven kenmerk (BLK)* is hiervoor geen goede optie. Dit omdat een groot gedeelte van de primaire sector uitgesloten wordt vanwege de structurele keizersneden (dit zijn de dikbil rassen o.a. Belgische Blauwe en Verbeterd Roodbont). Ook is het stukje duurzaamheid, waar de sector ook hoog op scoort, niet mee genomen in de kwaliteitseisen van *BLK*. De focus voor de toekomstige rundvleessector moet uitgaan naar het vermarkten van een 'regionaal product'. Hiermee wordt de nadruk gelegd op het unieke imago van een zeer diverse sector met superieure dierenwelzijnsnormen. Dit kan gebruikt worden in de communicatie richting de consumenten.

Naar aanleiding van het symposium en de uitkomsten van dit onderzoek heeft de Vakgroep LTO Vleesveehouderij twee doelen gesteld. De vakgroep gelooft dat ze:

1. De verkoop van rundvlees in kleinere supermarkten kunnen veranderen van geïmporteerd rundvlees naar alleen Nederlands rundvlees in 2018.
2. De marges van primaire producenten met 10 procent kunnen verhogen in 2018.

Om de doelen te kunnen bereiken zal de marketing van het Nederlandse rundvlees zich moeten focussen op het eind product. Een tastbaar stukje rundvlees dat door de consumenten bereid wordt. Dit rundvlees van een officieel vleesvee ras moet worden geproduceerd onder strenge dierenwelzijn normen. Het dier moet minstens gemest en geslacht zijn in Nederland (minstens 2xNL). Het moet geïdentificeerd worden met een kwaliteitslabel met superieure dierenwelzijnsnormen en duurzaamheidsnormen. Om de transparantie van de sector te verhogen moet het label officieel geaccrediteerd zijn. 'Minder maar Beter', dat is de filosofie die kan worden gebruikt in de communicatie richting de consument. Met deze filosofie wordt het veranderende consumptiepatroon van de consument aanvaard en wordt het Nederlandse rundvlees gepromoot als een beter rundvlees. Consumenten moeten worden geïnformeerd over de bereidingsmethodes van rundvlees via recepten en tips & tricks. Deze kunnen worden geplaatst op sociale media, tijdschriften of in supermarkten. Ook kan een bekende chef kok het imago bevorderen. Transparantie kan op consumenten niveau naar voren gebracht worden door verschillende marketing activiteiten. Deze zijn bijvoorbeeld open dagen, het promoten van fiets en wandelroutes door natuurlandschappen, het organiseren van excursies voor basisscholen en het bevorderen van verkopen op de boerderij.

Een plan van aanpak kan worden samengevat in zeven korte stappen. Deze zijn:

1. Het inventariseren van de totale productie van kwaliteitsrundvlees en de totale vraag van kleine supermarkten.
2. Het lokaliseren van alle kleine supermarkten in elke regio en deze koppelen aan primaire producenten die bereid zijn om te produceren onder een nieuw label.
3. Het opzetten van de gehele keten voor een nieuwe productie lijn. Dit gaat om slachthuizen, uitsnijderijen, verpakkingsbedrijven en groothandels.
4. Het ontwikkelen van een kwaliteitssysteem dat dierenwelzijn en duurzaamheid garandeert. Dit moet door een accreditatie via de *Raad van Accreditatie*.

5. Het inventariseren van alle kleine supermarkten die bereid zijn om Nederlands geproduceerd rundvlees te verkopen.
6. Het overtuigen van de geselecteerde supermarkten van de voordelen en kwaliteiten van Nederlands geproduceerd rundvlees
7. Communicatie richting de consument over dierenwelzijn, kwaliteit, bereidingswijze en redelijke prijs.

1. Introduction

Freedom of discomfort, freedom from hunger and thirst, freedom from fear and distress, freedom from pain, injury and disease, and freedom to express natural behavior are the 'five freedoms' for farm animals that serve as a backbone for animal welfare legislation, decision making (Farm Animal Welfare Council 2009), and for the initiatives of different quality assurance labels all over the EU.

EU Council Directive 98/58/EC is the backbone for all animal welfare legislations in Europe. This is translated into national laws for each EU member state. In the Netherlands *Wet Dieren* describes the direct translation. These translations might differ in other EU member states according to the visions of national government as long as they are according to the EU directive.

Special vertical laws on EU level exist for transportation and animal welfare (Council Regulation (EC) 1/2005) and the verification and safeguarding of these laws (Council Regulation (EC) 882/2004). These regulations cover all animal species. In addition special vertical regulations for animal welfare consist on EU level these include regulations for pigs¹, broilers², calves³, laying hens⁴. For cattle this is not the case. This is one of the reasons why many different animal welfare initiatives are set up in the beef producing industry to meet a growing demand from consumers for better animal welfare practices in the entire animal husbandry sector.

Examples of initiatives related to the improved animal welfare practices that are marketed within the Dutch retail are *Beter Leven kenmerk* from the *Dierenbescherming*, *Scharrelrundvlees*, *Waterland Keurmerk*, *Bief Select*, *Vleesvee Intergratie Twente*, and different regional initiatives under the label 'Erkend Streek product'. These labels are sold in Dutch supermarkets. Many other initiatives exist for the catering branch and the butcher's retail canal.

The Dutch beef cattle sector produces enough to meet 57 percent of the consumer demand. This means that beef has to be imported to meet the total demand of beef consumers in the Netherlands. The most important EU bovine meat imports come from Germany, Belgium, United Kingdom, and Ireland (CBS^b 2012). A total of 347,000 tons beef is imported yearly (2011) (PVV & PVE 2012). With all the import beef being marketed on the Dutch market Dutch beef producers question the animal welfare standards of beef producers in other EU member states. Especially because several supermarkets, such as the Albert Heijn and Jumbo, promote with imported products from Ireland or South America (beef from Argentina). This raises a question;

What are the differences in animal welfare on primary beef producing operations on a legislative and on a labeling level of meat sold in the Netherlands?

Supermarkets that import beef products often sketch the country of origin as superior living conditions for bovine animals. A good example is the Irish living conditions of open

¹ Varkensbesluit of 7 July 1994: http://wetten.overheid.nl/BWBR0006806/geldigheidsdatum_29-11-2012

² Vleeskuikenbelsuit 2010 of 1 June 2010: http://wetten.overheid.nl/BWBR0027822/geldigheidsdatum_29-11-2012

³ Kalverenbesluit of 7 July 1994: http://wetten.overheid.nl/BWBR0006805/geldigheidsdatum_29-11-2012

⁴ Legkippenbesluit of 27 May 2003: http://wetten.overheid.nl/BWBR0015138/geldigheidsdatum_29-11-2012

pastures and grazing cows for Greenfields Beef in the Albert Heijn. The image of this beef is set off as 'perfect'; leaving Dutch produced beef as an underdog in the supermarket chain, which raises the second question:

How can Dutch beef, produced under higher animal welfare standards, be better marketed in the supermarket chain?

The department of LTO Beef cattle represents the interest of the Dutch beef cattle producers and tries to create opportunities for its members. In addition to better marketing of beef, the focus goes out to solutions for the manure, an acceptable CAP and hygiene codes in the context of food safety and animal welfare, plus the opportunities for innovation⁵. Signals from the sector indicate that it is important to research the legislation in member states and requirements for producers for quality labels of beef produced. In this market research an inventory is given on national legislation of the largest importing countries in the EU, the image of the Dutch beef sector is researched, a questionnaire for consumers concerning their knowledge and preferences on beef is done and short interviews with supermarkets are held to inventory their view. These results are translated into several strategies and a plan of approach to improve the image of Dutch produced beef.

⁵ LTO website: <http://www.lto.nl/nl/25222730-Vleesveehouderij.html>

1.1 Research questions

In the introduction two questions are raised concerning the marketing of beef produced in the Netherlands. These two questions can be translated into the following main question:

How can Dutch beef, which is produced under higher animal welfare standards, be better marketed in the Dutch supermarkets?

To answer this main question several supporting questions are formulated at the beginning of this research. These are the following questions:

1. What are the market characteristics of the Dutch beef industry and its important import countries; Germany, the United Kingdom, Belgium, and Ireland?
2. Which animal welfare standards apply in Europe and how are they translated into national laws in the Netherlands and in competing import countries?
3. Which major quality label identifies animal welfare in the Netherlands, Germany, the United Kingdom, Belgium, and Ireland?
4. Of the most important quality labels in each member state, what are the actual differences between the labels that identify higher animal welfare standards of meat sold in the Dutch supermarkets?
5. On which tangible or intangible benefit can the Dutch beef industry differentiate itself?
6. Can the *Beter Leven kenmerk* label from the *Dierenbescherming* be used to improve the image of Dutch beef produced under higher animal welfare standards?
7. Is there a demand amongst supermarkets for Dutch produced beef?
8. What is important in the set up for a marketing plan for the quality label *Beter Leven* from the *Dierenbescherming*?

During the literature study sub questions 3, 4, and 8 are found to be irrelevant for the outcome of this research. Therefore, after consultation with the Department of LTO Beef Cattle, these questions are changed into the following questions:

3. What are the differences in production requirements for quality labels identifying quality beef produced under higher animal welfare standards that are marketed in the Dutch supermarkets?
4. Of the most important quality labels in each member state, what are the differences between the member states and the Netherlands on the requirements of animal welfare?
8. What strategies are preferred by actors in the chain for the marketing of beef produced in the Netherlands?

1.2 Research method

The environment in which the Dutch beef producer has to operate is analyzed based on a Macro and Micro analysis using the marketing plan structure of E. Muilwijk: "Handleiding Marketingplan"⁶. The basic format used is the ABCD analysis (Customer, Sector, Competitor, and Distribution analysis⁷). In this analysis retailers (e.g. supermarkets, butchers) are seen as customers. These are analyzed together with the Dutch beef sector and the direct and indirect competitors. Distribution channels, including the wholesalers who are important for the full valuation of a carcass, are important. However no attention will be given to their role in the sector in this research.

The ABCD analysis is extended with the five W's analysis (including the questions who, what, where, when, and why?) from Ferrel, *et Al* (1999)⁸ to support the customer analysis. The beef sector analysis is strengthened using the PESTEL Model (Political, Economical, Socio- Cultural, Technological, Ecological, and Legal factors) is used to find opportunities and threats in the Macro environment. In this same analysis Porter's Five Forces model (buyer power, supplier power, threat of substitute products, threat of new entrance, and rivalry within the beef producing sector) is used to determine the attractiveness of a market and to determine strengths and weaknesses in the Micro environment.

The Department of LTO Beef Cattle is particularly interested in the differences in legislation in EU member states, marketing information and different quality labels. Therefore the focus in the PESTEL analysis will be on the following characteristics:

- European and National Legislation on animal welfare. Including general legislation, legislation during transport, and verification and safeguarding (Political analysis);
- Market information in the Netherlands, including the amount of primary producers, herd numbers, carcass prices, production, and the import and export (Economical analysis);
- Different quality labels and their production requirements used in the Dutch supermarkets for the marketing of beef (Ecological analysis).

Technological developments are unimportant for this research and will therefore only be mentioned shortly. The Legal analysis is included into the Political analysis.

Porter's Five Forces analysis will determine the attractiveness of the market by giving each of the five forces a rating of --, -, O, +, ++. In which -- means a high force and negative for the sector, and ++ means a low force and positive for the sector. Each force will have several points of attention that determine this rating.

After the literature research on legislation, market information, and animal welfare requirements for the most important quality labels used in the importing countries that are decided upon in discussion with representatives of the national departments during the Copa-Cogeca meeting in Brussels on 26 and 27 of November 2011. A comparison analysis is done with the two most important and well documented quality labels in the Netherlands. These are *Beter Leven kenmerk* and *Scharrelrundvlees*. The quality labels of the importing countries include: *Red Tractor* and *Freedom Foods* (United Kingdom), *Beef and Lamb*

⁶ E. Muilwijk (2009) Handleiding Marketingplan©2009-2013. ISBN: 9789490886011. [Online] available at: <http://www.intemarketing.nl/>

⁷ As a translation of the Dutch ABCD Analysis model: 'Afnemersanalyse', 'bedrijfstakanalyse', 'concurrentenanalyse' and 'distributieanalyse'.

⁸ Ferrel, O.C. *et al.*, 1999, *Marketing Strategy*, The Dryden Press, Orlando, USA.

Quality Assurance Scheme (Ireland), *Meritus* (Belgium), and *Qs- Qualitätssicherung* (Germany). The literature research and analysis will form the Competitor analysis (C).

A questionnaire was held amongst consumers about quality labels and the importance of animal welfare in beef. The questionnaire was issued through the social media networks Facebook and Twitter from 19 February 2013 until 9 April 2013 (48 days). A total of 128 persons responded. Social media was used to reach a high density of respondents in a broad variety of age groups and social backgrounds. The questionnaire was shared by 9 people on Facebook and retweeted 14 times on Twitter. A total of 7,500 people were reached.

Supermarkets were interviewed between January and April 2013. These supermarkets include Albert Heijn, Aldi, Coop, Jumbo, Plus, Lidl, C1000, Hoogvliet, Dirk, Bas & Digros, Spar, Emté, Dekamarkt, Poiesz, and Boni. The supermarkets that were willing to cooperate and respond to the questions concerning their purchasing strategy and quality assurance were Coop, Jumbo, C1000, Poiesz, and Boni.

The above mentioned research is combined together in a SWOT analysis mentioning strengths, weaknesses, opportunities and threats in the Macro and Micro environment of the Dutch beef sector. This analysis has resulted in several strategic questions or Main Attention Points (MAPs) that the Dutch beef sector can use to promote nationally produced beef.

A symposium on 'Dutch Beef' was organized to present the outcomes of the literature research and the questionnaire to several actors in the chain. The MAPs from the SWOT analysis were laid out and formed the basis for a discussion at the end of the presentation. The goal of the symposium was to inform participants and to discuss the future of Dutch produced beef. This will result in a fitting strategy to promote the Dutch beef sector. The participants of the symposium are mentioned in annex 6.

As a result of the symposium and the outcome of the market research goals are set by the Department of LTO Beef Cattle. Based on this a marketing strategy will be made in the 4 P's analysis. This analysis describes the Product, Price, Place, and Promotion strategies for Dutch produced beef. Several marketing agencies are also consulted. These agencies include Grooh communications and Inzicht communications. They are responsible for the marketing of *Kom in de Kas*. Based on the insights of these communication agencies and the information of the 4 P's analysis a plan of action on communication is formulated.

During this research several articles were written about this research in collaboration with *Nieuwe Oogst*. A press release was issued after the symposium also. All published articles are mentioned in annex 8.

1.3 Chapter layout

This report started with two quotes. The first quote is by Benjamin Franklin, describing the difficulties to obtain a good image. The other quote is by Guus Laeven, Chairman of the Federation of Dutch Beef Cattle Studbooks. He is positive about the sector and believes that the good image of the sector should be carried out more towards consumers. After the preface and table of contents a summary in English and in Dutch is given. Chapter 1 includes the introduction of this research, the research questions, the research method used, this chapter layout and a list of definitions.

Chapter 2 is the largest chapter of this research analyzing the Macro and Micro environment. This will start with the analysis of customers and retailers in the beef sector in chapter 2.1. It will describe the amount of companies in the chain and the importance of supermarkets in the marketing of beef. Chapter 2.2 is the beef sector analysis including the two important formats PESTEL (in chapter 2.2.1) and Porter's Five Forces (in chapter 2.2.2). The first will highlight the legislation in the EU and the Netherlands, market information, the importance of social organizations, and an inventory of the quality labels used in the Netherlands. The second will analyze the attractiveness of the market. The PESTEL and Porter's Five Forces analysis will both include the most important results of the questionnaire. Chapter 2.2.3 is the summary of the Macro and Micro environment stating several positive and negative developments in the sector

The competitor analysis in chapter 2.3 is focused on legislation on animal welfare in the import countries Germany, Belgium, the United Kingdom, and Ireland (chapter 2.3.1) market information is also mentioned in Chapter 2.3.2 and in Annex 3. The case study will compare animal welfare quality labels of importing countries to Dutch labels in chapter 2.3.3. A summary of this analysis including several positive and negative developments of the sector is given in chapter 2.3.4.

The summaries of the PESTEL and Porter's Five Forces will form a SWOT analysis in chapter 2.4. A confrontation analysis will be done after which 5 Main Attention Points (MAPs) are given as strategic questions. These questions are answered partially by participants of the symposium on 'Dutch produced beef' in chapter 3. It also gives a short summary of the discussion held during the symposium. Questions are further answered in chapter 4 where the marketing objectives from the Department of LTO Beef Cattle and strategies according to the 4 P's method for the sector are mentioned.

After the conclusion in chapter 5 a plan of action will be given on the communication towards supermarkets and consumers in chapter 6. The discussion in chapter 7

After the references of articles, legislation and meetings used for this research the annexes will give additional information on this research. Annex 1 will give the contents of regulations on animal welfare in the EU and the Netherlands that is mentioned in chapter 2.2.1. Annex 2 will give the complete questionnaire results used to support the Macro and Micro analyses. Annex 4 will give the trends in average carcass prices in the importing countries to support chapter 2.3.2. Annex 5 will give the method used to compare the different quality labels in the case study of chapter 2.3.3. Annex 6 will give a complete overview and official notes on the symposium on 'Dutch produced beef' supporting chapter 3. Annex 7 is the press release of the symposium. Annex 8 includes the references of all published articles about this research and annex 9 will give a short explanation about the Department of LTO Beef Cattle.

1.4 Definitions

Belgische Boerenbond

Belgium farmers union that is active in the advocacy for farmers and growers in Belgium.

Beter Leven kenmerk (BLK)

Better Life label, for the identification of animal welfare practices used during the production meat and eggs by using a star ranking system. 1 star, 2 stars, or 3 stars all identify better animal welfare standards in which more stars equal more animal friendly the product.

Bief Select

A label identifying selected beef or special beef. It was initiated by Henk Broeders and focuses on food safety, animal welfare, and the environment. This label is the only label in the Netherlands that is certified for 2 stars of Beter Leven kenmerk from the Dierenbescherming.

Dienst wegverkeer

Traffic authority in the Netherlands that is responsible for the application of the necessary documents for transport.

The chain

All actors that are involved in the producing, slaughtering, cutting, packaging, wholesaling, and retailing of beef and beef products. The primary producer of beef is the first actor in the chain and the consumer is the last actor in the chain.

Dierenbescherming

The animal protection services in the Netherlands. The largest organization in the Netherlands that represents the interest of all animals: Pets, farm animals, wildlife, and laboratory animals. They are also the initiators of the quality label '*Beter Leven kenmerk*'.

Erkend Streek product

This is a label that recognizes locally produced products and is used for beef products as well as other agricultural products in the Netherlands, such as vegetables, fruits, or other meats.

Food Miles

The amount of kilometers that beef has to travel from 'farm to fork', from the producer of beef cattle to the consumer.

Keten Duurzaam Rundvlees (KDR)

The label Chain sustainable beef is an initiative by Edwin and Anita Heijdra to improve the coalition between the beef producer the slaughterhouse, beef cutting plants, wholesalers, butchers, the (retail) market, and customers or stakeholders. It is based on a sustainable production of beef.

Import countries

The four major countries in the European Union that import the most beef for the Dutch beef market. These are Germany, Belgium, the United Kingdom, and Ireland.

Meat and pasture cattle

A grouping of the following cattle used for meat production: Veal calves, youngstock for meat production, meat and pasture cows older than two years, suckle cows older than two years, and bulls for meat production older than two years.

Scharrelrundvlees

A quality label used to identify free-range beef. The scheme is based on good animal welfare practices on the production of free-range beef suckler cows and producers are certified by the accredited organization PROduCERT. Inspected free-range beef is from the Netherlands.

The sector

These are all primary quality beef producers in the Netherlands. It also includes other players in the chain. These are: slaughterhouses, cutters, packers, or wholesalers of bovine meat in the Netherlands.

Vleesvee Intergratie Twente (VIT)

Cattle integration of Twente is a combination of cattle trade, fattening luxury cattle and marketing of quality beef.

Waterland Keurmerk

Waterland quality label, a foundation manages this label that stands for regional quality products from the peat land area of North Holland. The label Waterland guarantees a controlled origin and nature and animal welfare. The label is used for beef, veal and lamb from the North Holland Waterlands and must be subject to strict production and slaughter methods.

Wakker Dier

Organization in the Netherlands that is active on lobbying for animal rights.

Wet Dieren

Dutch horizontal law on animals in which general animal welfare legislation is mentioned with a reference to vertical laws on handlings and procedures, veterinary handlings, transportation, and several animal specific regulations is given.

2. The Dutch beef sector analysis

The environment in which the Dutch beef sector operates is analyzed on a Macro and a Micro level. These can be strongly or weakly influenced by the participants of the sector. This chapter is based on the ABCD analysis which consist of a customer (A), sector (B), competitor (C), and distribution (D) analysis. Analysis A is done by answering the 5 W's (who, what, where, when and why?). Analysis B, the largest and most important section is analyzed by using the PESTEL Method (Political, Economical, Social, Technological, Ecological, and Legal) describing expected developments and dynamics in the Macro environment to identify opportunities and threats. This is followed by a Porter's Five Forces analysis (supplier power, buyer power, threat of substitute products, threat of new entrance, rivalry within the beef producing sector) to identify strengths and weaknesses in the Micro environment. Analysis C will analyze the direct and indirect competitors with the emphasis on the direct competitors also to identify strengths and weaknesses. Analysis D is not important in this research and will not be mentioned.

2.1 Analysis of customers and retailers in the beef sector (A)

Different customers exist throughout the beef sector. For the purpose of this research the supermarkets and other retailers are seen as customers. The emphasis is laid on supermarkets to be able to answer sub question 7. Table 1 and Figure 1 give information about other participants in the chain. Table 1 includes slaughter houses, meat processors, and wholesale. These numbers also include other meats such as pork and poultry.

	2010	2011
Slaughterhouses	253	263
Meat-processing industry	194	191
Wholesale	1,554	1,509
Total	16,855	17,812

Table 1. Enterprises in the Dutch livestock and meat sectors (PVV & PVE 2012).

As seen in table 1 there is a decrease in all links of the chain between 2010 and 2011. Slaughterhouses however saw an increase in 2011 (PVV& PVE 2012). Figure 1 gives an overview of the cattle slaughter houses that slaughter over 10,000 animals per year. There are 9 different ones in the Netherlands. The largest two being firstly, Vion Food Groep, who slaughters thousands of bovine animals per week. A large part of this goes to Dutch customers. They also have a few large European customers⁹. The second large slaughter house is Exportslachterij J. Gosschalk en Zn who slaughters about 135 bovine animals per hour of which 90 percent dairy cows.¹⁰

In 2012 there were 2.040 butchers in the Netherlands, a slight drop compared to the previous year (see figure 2). Tough competition with supermarkets leads to a decreasing market share for butchers. Their current market share of 20 percent is at risk (HBD 2012). To create opportunities and meet the trend that consumers demand easy, healthy meat products with a 'good story', including animal welfare, environment, and food safety butchers are improving the presentation of their products, expanding their assortment with ready to eat products, complete meals, regional products, organic products, and pre-cut meats and tapas to stimulate impulse purchases (Rabobank 2013).

⁹ From the website of VION Food Group: <http://www.vionfood.nl/nl/activiteiten/runderen/>

¹⁰ From the website of J. Gosschalk and Zn: <http://www.gosschalk.com/>

Figure 1. Cattle slaughterhouses in 2011, slaughtering more than 10,000 animals per year (PVV & PVE 2012).

Number of animals slaughtered	Number of slaughterhouses		Number of animals slaughtered x 1,000 stuks	
	2010	2011	2010	2011
10,000 - 25,000	3	4	41	63
25,000 - 75,000	4	3	172	131
> 75,000	2	2	232	246

Size category: 10,000 - 25,000 cattle slaughterings per year

Someren: Tornassen
 De Hoef: Wouters
 Nieuw Heeten: G.J. Hutten en Zn
 Dodewaard: Van Hatterm Vlees

Size category: 25,000 - 75,000 cattle slaughterings per year

Dokkum: Wadden Vlees
 Amsterdam: Abattoir Amsterdam
 Nijmegen: Slachthuis Nijmegen

Size category: > 75,000 cattle slaughterings per year

Tilburg: Vion Food Group
 Epe: Exportslachterij J. Gosschalk en Zn

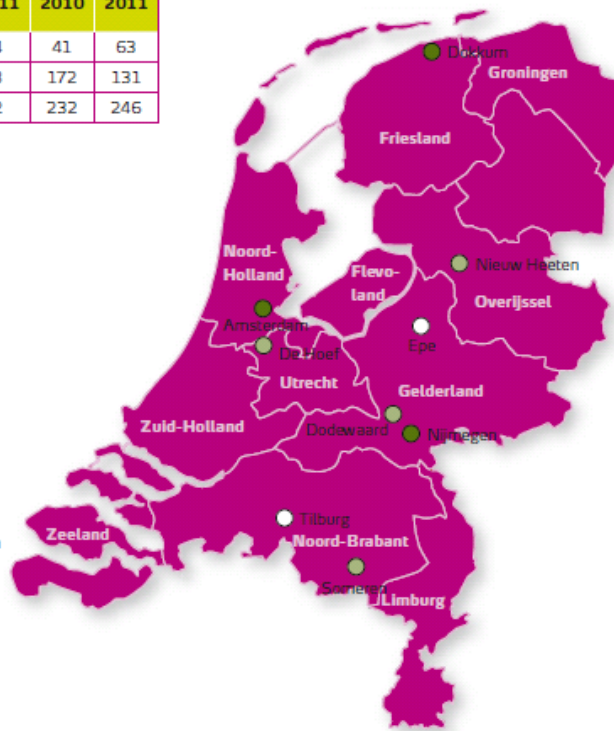
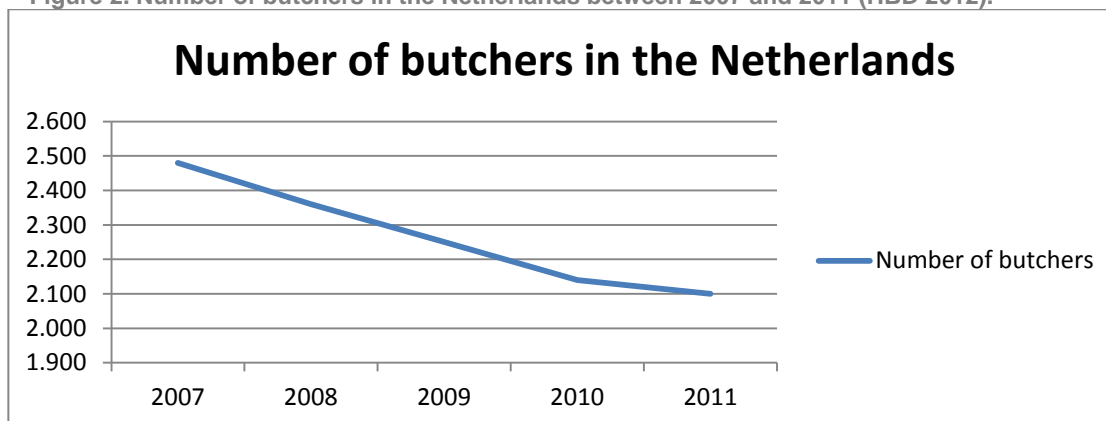
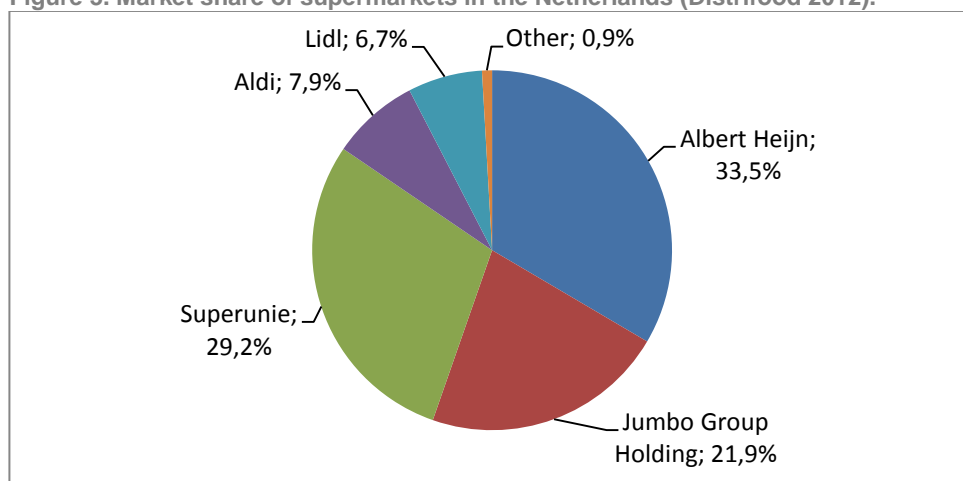


Figure 2. Number of butchers in the Netherlands between 2007 and 2011 (HBD 2012).



Consumers in the Netherlands buy most of their groceries in the supermarkets. There are more than 25 different supermarket chains of which the largest are Albert Heijn, Jumbo, C1000 (part of Jumbo), Aldi, and Lidl. Smaller supermarkets include those that are part of the Superunie such as Coop, Deen, Detailretail (including Dekamarkt, Dirk, Bas & Digros), Emté, Hoogvliet, Jan Linders, Poiesz, Spar, and Vomar. The market share of the supermarkets is seen in figure 3. The number of supermarkets in the Netherlands is decreasing. From 7.100 supermarkets in 2000 to 5.800 supermarkets in 2010. The size per supermarket is increasing from an average of 769 m² in 2005 to an average of 877 m² in 2011. This change has an influence on sales per store changing from an average sale of € 8.000 per day in 2005 to an average of € 14.000 per day in 2009 (CBS^e 2012).

Figure 3. Market share of supermarkets in the Netherlands (Distrifood 2012).



Albert Heijn has the largest market share with 33,5 percent. This has remained constant over the years. Superunie is the second largest supermarket concern with 29,2 percent of the market. After the take over of C1000 by Jumbo Group Holding in 2011 their market share increased to rank third with 21,9 percent (Distrifood 2012, ABN AMRO 2012).

Supermarket chain	Origin of beef
<i>Albert Heijn</i>	The Netherlands ¹¹ , Ireland (Greenfields), Uruguay, and Argentina (South America).
<i>Aldi</i>	-
<i>Boni</i>	Europe: mostly Netherlands, Ireland, France, Belgium, etc.
<i>C1000</i>	Netherlands, Germany, Poland, etc. ¹²
<i>Coop</i>	France, Ireland (Beter-Leven)
<i>Dekamarkt</i>	Ireland, Netherlands, Ireland
<i>Dirk, Bas of Digros</i>	Netherlands
<i>Emté</i>	-
<i>Hoogvliet</i>	-
<i>Jumbo</i>	Ireland (Beter-Leven)
<i>Lidl</i>	-
<i>Plus</i>	Ireland
<i>Poiesz</i>	Netherlands, France, Ireland
<i>Spar</i>	The Netherlands (Distrifood 2012)

Table 2. Origin of beef and beef products of supermarkets in the Netherlands.¹³

Supermarkets choose different origins of beef for their store (see table 2). Europe is the most popular destination. However South America is becoming more important, especially for the Albert Heijn. The most important reason why supermarkets choose import beef are the large volumes and a constant supply that is uniform throughout the year including its peaks in the fourth quarter when 26,6 percent of the total beef is sold, and the first quarter of the year when 26,3 percent of the total beef is sold (GfK 2012). The Netherlands cannot produce according to these requirements. This is given as a response by several supermarkets. See also the quotes below about the reason to choose Dutch beef or to not choose Dutch beef.

¹¹ From Albert Heijn location Meppel on 25 February 2013, beef products available: steak, femur, sucade.

¹² Email response from customer service C. Scholte, C1000 on 25 February 2013.

¹³ Albert Heijn, Aldi, Lidl, Emté, Hoogvliet, Spar where not willing to answer related questions.

Reasons for supermarkets to choose Dutch produced beef are the following:

- *"When the consumer chooses [bovine] meat in the supermarket, they should get the tastiest and the best meat."*, Spar, Sjaak Kranendonk CEO (DistriFood 2012).
- *"The beef that we offer has traveled less kilometer from farm [to fork] so that the flavor is maintained."*, Spar, Sjaak Kranendonk CEO (DistriFood 2012).
- *"[Dutch produced beef] is sustainable because of the reduced food miles."* Boni, Gerrit van Zalk¹⁴
- *"Our beef is tasty, tender, produced efficiently and under good animal welfare standards."*, Boni, Gerrit van Zalk¹¹
- *"Our policy is based on sustainable and responsible beef preferably...regional [beef]. Sustainability and animal welfare are priorities..."*, Poiesz¹⁵.

Reasons for supermarkets to not choose Dutch produced beef are the following:

- *"Volumes produced in the Netherlands are not sufficient..."*, Coop
- *"Dutch producers cannot guarantee a constant quality level...beef from France is tender and retains a good red color."*, Coop
- *"To spread the risk and to secure the availability [of supply during sales, when the most meat is sold] we do not specifically choose Dutch beef."*, C1000
- *"The Netherlands does not have the volume to supply the full assortment of beef in the supermarkets."*, Boni, Gerrit van Zalk¹¹

2.1.1 Summary customer analysis (A)

The number of butchers and their market share in beef sales is decreasing while the market share if supermarkets are increasing. The largest single supermarket concerns are Albert Heijn and Jumbo (who). Most supermarkets choose imported beef over Dutch produced beef. Smaller supermarkets such as Dekamarkt, Dirk, Bas en Digros, Boni, and Poiesz are more active in marketing Dutch produced beef. These supermarkets believe in the added value of a 'good story' that can also be used as a marketing tool (answering sub question 7) (what). The Dutch beef sector cannot supply a large volume with a constant uniform quality throughout the year (why) and during its peak in the fourth quarter (holidays) (when). Consumers desire easy to cook products. Even though butchers are improving their presentation and including ready to eat meals, tapas, and pre-cut meats to their assortment, most consumers will still choose to purchase beef at a supermarkets because of the large assortment of all daily groceries (where).

¹⁴ Interview with Gerrit van Zalk in Nijkerk on 6 March 2013.

¹⁵ Email from M. Laning, Secretary of the meat purchasing agent at Poiesz on 18 March 2013.

2.2 The Dutch beef sector analysis (B)

The Dutch beef sector is analyzed on a Macro and Micro Level using the PESTEL and the Porter's Five Forces analysis. This will result in a list of opportunities, threats, strengths, and weaknesses within the sector. As mentioned before in chapter 1.2 the most important factors in the PESTEL analysis are the EU legislation and national legislation (P), information about the beef producing market (E), consumer demands and desires (S), and important quality labels in the Netherlands (E). Porter's Five Forces analysis will focus on the import countries (power of suppliers), social organizations that affect the buyer power, pork, poultry, fish and meat substitutes (threat of substitute products), and the strength of entrepreneurs throughout the chain of beef producers is analyzed (rivalry amongst entrepreneurs).

2.2.1 Macro environment of the Dutch beef sector

In the Macro environment of this research the following aspects are highly important to answer part of sub questions 1 and 2 and sub question 3 (chapter 1.1):

- The European legislation and the National legislation concerning animal welfare;
- Market information including: Number of cattle, companies, carcass prices, and import and export numbers;
- Consumption patterns, consumer prices, importance of animal welfare in purchasing decisions;
- Inventory of different quality labels that are sold in the Dutch supermarkets including: *Beter Leven sterren 1 & 2*, *Scharrelrundvlees*, *Bief Select*, *Waterland Keurmerk*, and *Vleesvee Intergratie Twente (VIT)*.

These important aspects will cover the Political, Economical, Socio-Cultural, and Ecological aspects. Other aspects are either included in other chapters or not mentioned in great detail. The analysis will end with a short conclusion stating the major opportunities and threats in the overall summary in chapter 2.2.4 these will be categorized in strong and weak forces.

Political/ Legal

Good animal welfare practices in the primary production process are of a high political and social priority in the Netherlands. Society demands a level of welfare that is higher than the legal requirements based on European and Dutch legislation (Raad van Dieraangelegenheden 2012). This sub chapter will answer part of sub question 2 (chapter 1.1) on which standards and legislation apply in the European Union (EU) and in the Netherlands. In the EU the groundwork for animal welfare regulations is laid down in two basic regulations stating the general requirements for all animals kept for farming purposes. These regulations are:

- *Council Directive 98/58/EC*
- *Council Decision 78/923/EEC*

Decision 78/923/EEC adopted the outcome of the European Convention for the protection of animals kept for farming purposes that was hold in Strasbourg in 1976. These outcomes are mentioned in the annex of *Directive 98/58/EC* and form the ground work for all legislation concerning animal welfare of all member states. The annex lays down requirements concerning staffing, inspection, record keeping, freedom of movement, buildings and accommodations, animals not kept in buildings, automatic and mechanical equipment, feed, water and other substances, mutilations, and breeding procedures that must be followed within the EU.

In *Decision 78/923/EEC* it clearly states that: "...the protection of animals is not in itself one of the objectives of the Community." It furthermore explains that the main reason for adapting animal welfare requirements is to ensure equal conditions and competition within the EU, plus to ensure the functioning of the common market. This is also the purpose of *Directive 98/58/EC*. The importance of animal welfare in law making increased with the Treaty on European Union (1992) where it states that "[The European Commission Institutions should] pay full regard to the welfare requirements of animals...when drafting and implementing Community legislation..."¹⁶ This is even more strengthened by the Treaty of Amsterdam of 1997 where the voluntary option of paying regards to animal welfare is repealed by: "...the Community and Member States shall pay full regard to the welfare requirements of animals...when formulating and implementing...policies..."¹⁷

Another issue mentioned in the European Convention for the Protection of Animals Kept for Farming purposes is that: "... it shall apply to the keeping, caring, and housing of animals and in particular animals in modern intensive stockfarming systems." This does not include extensive farming systems such as the beef farming industry in the Netherlands.

Another step in the keeping of animals kept for farming purposes is transportation. During transportation of animals the following regulations account with regards to animal welfare:

- *Council Regulation (EC) 1/2005*
- *Council Regulation (EC) 1255/97*
- *Council Directive 91/628/EEC*

The regulation of 2005 made all requirements mentioned in the directive of 1991 mandatory for all member states. These include the fitness of animals during travel, handling of animals, space requirements, and transport distance requirements. Regulation (EC) 1255/97 includes requirements for control posts in the EU where animals are unloaded for a rest period according to Regulation (EC) 1/2005.

In the Netherlands these regulations are translated into several national laws. The following regulations form the base for the protection of animal welfare:

- *Wet Dieren*
- *Gezondheids- en welzijnswet voor dieren*
- *Besluit welzijn productie dieren*
- *Ingrepenbesluit*
- *Regeling toegelaten handelingen*

The *Wet Dieren* came into force on the first of January 2013 enhancing the previous *Gezondheids- en welzijnswet voor dieren*. They are a direct translation of the EU general regulations and apply to labeling, cutting, packing, marking, sorting, and transporting of meat as well as the promotion of the quality of it. This law states that legislation may be set up for an animal species to regulate the keeping systems and handling methods, with regards to animal welfare. However, these do not exist for bovine animals. The only specific requirements for beef cattle are mentioned in the *Ingrepenbesluit* and *Regeling toegelaten handelingen*. These laws mention the following procedures that are allowed on bovine animals:

- Procedures to infertile bovine animals
- Procedures that are of veterinary necessity
- Dehorning (when it can increase safety for humans and animals);

¹⁶ Declaration on the protection of animals (1992) (OJ L 191, 29.7.1992, p. 103).

¹⁷ Protocol on the protection and welfare of animals (1997) (OJ C 340, 10 November 1997).

- Applying a smooth stainless steel nose ring for bulls;
- A maximum of two identification methods including eartags (in one ear), applying a tattoo, subcutaneous or intramuscular appliance of micro electronica, and freeze branding (*Ingrepenbesluit*, art. 2 lid 1).

A person that keeps animals on an agricultural holding may perform a number of operations. These include the application of ear tags, subcutaneous or intramuscular appliance of micro electronica, dehorning of bovines (provided that a veterinarian has applied local anesthetics) using the electronically hot air method on animals that are less than two months old, or using a wire saw (and anesthetics) after the age of six months old. They are also permitted to apply nose rings to bulls and to remove super numeral teats before the age of 4 weeks. Procedures in which bovine animals are made infertile has to be done by a veterinarian (*Regeling toegelaten handelingen*, art. 3, art. 4, art. 7).

Figure 4 shows all European regulations and Dutch regulations concerning animal welfare. The most important regulations for this research are the general legislation on animal welfare. The laws and regulations mentioned in figure 4 are described further in annex 1.

Figure 4. Overview legislation animal welfare in EU and the Netherlands.¹⁸

	General Legislation Animal Welfare	Transportation	Identification and Traceability	Verification and Safeguarding
EU	Council Directive 98/58/EC Council Decision 78/923/EEC	Council Regulation (EC) 1/2005 Council Regulation (EC) 1255/97 Council Directive 91/628/EEC	Council Regulation (EC) 1760/2000 Commission Regulation (EC) 9111/2004	Council Regulation (EC) 1760/2000
NL	Wet Dieren Gezondheids- en Welzijnswet voor Dieren Besluit Welzijn Productie Dieren Ingrepenbesluit Regeling toegelaten handelingen	Regeling dierenvervoer 2007 Regeling controle posten*	Regeling identificatie en registratie van dieren*	Regeling aanwijzing ambtenaren gezondheids- en welzijnswet voor Dieren*

Economical

Important economical factors of the beef sector are herd numbers, number of companies, number of slaughters, carcass prices, and imports and exports. This information will answer part of sub question 1 (chapter 1.1) on the characteristics of the Dutch beef industry. Table 3 gives the inventory of the Dutch cattle herd.

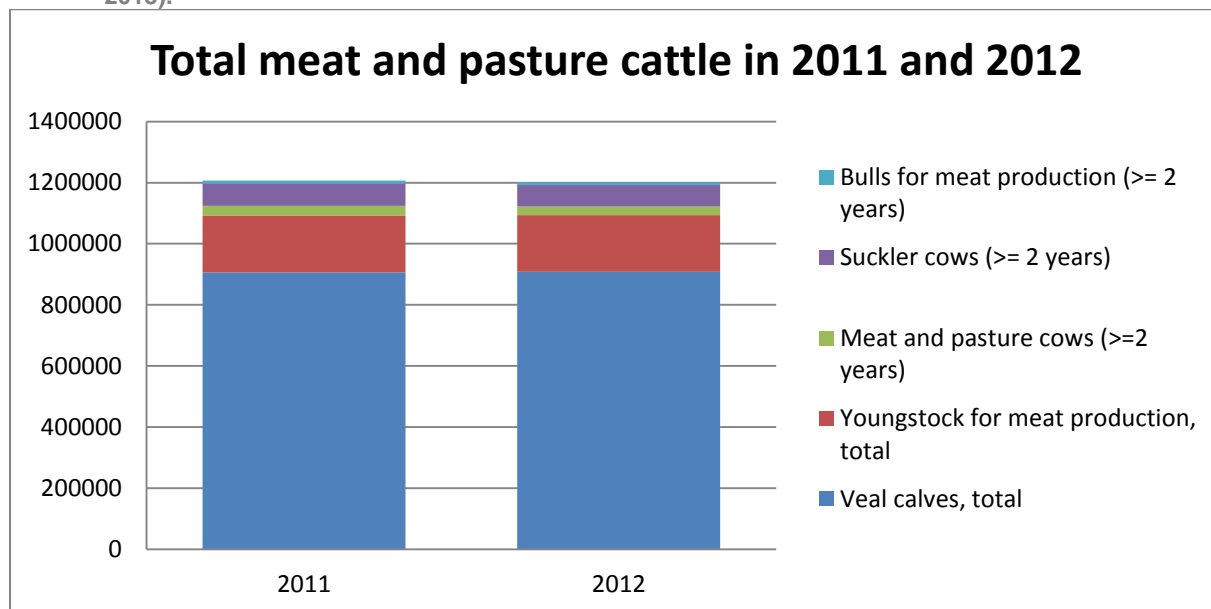
	2000	2005	2009	2010	2011	2012
Total herd	4.068.709	3.796.778	3.967.599	3.975.194	3.885.345	3.879.252
Percentage dairy herd	69,8%	68,2%	68,9%	68,6%	68,9%	69 %
Number of dairy cattle	2.839.493	2.587.600	2.734.412	2.725.353	2.678.164	2.678.213
Percentage beef and pasture cattle	30,2%	31,8%	31,1%	31,4%	31,1%	31 %
Number of beef and pasture cattle	1.229.216	1.209.178	1.233.187	1.249.841	1.207.181	1.201.039

Table 3. Cattle herd in the Netherlands between 2000 and 2011 (CBS^a 2012, CBS^b 2013).

¹⁸ The regulations with a (*) are not important for his research and are added for the completion of this table.

Only 31 percent of the total herd represent beef and pasture cattle. This group is divided up into several categories (see definitions in chapter 1.4). In 2012 there were 1.201.039 beef and pasture cattle. This is 2,3 percent lower than in 2011 and six percent lower compared to 2000.

Figure 5. Total meat and pasture cattle in the Netherlands in 2011 & 2012 (CBSa 2012, CBSb 2013).



The largest group of meat and pasture cattle consist of veal calves (see figure 5) which is over 73 percent of the total slaughtered bovine animals in 2012. In 1990 veal calves only consist of 47 percent of the total slaughtered bovine animals (CBS 2012).

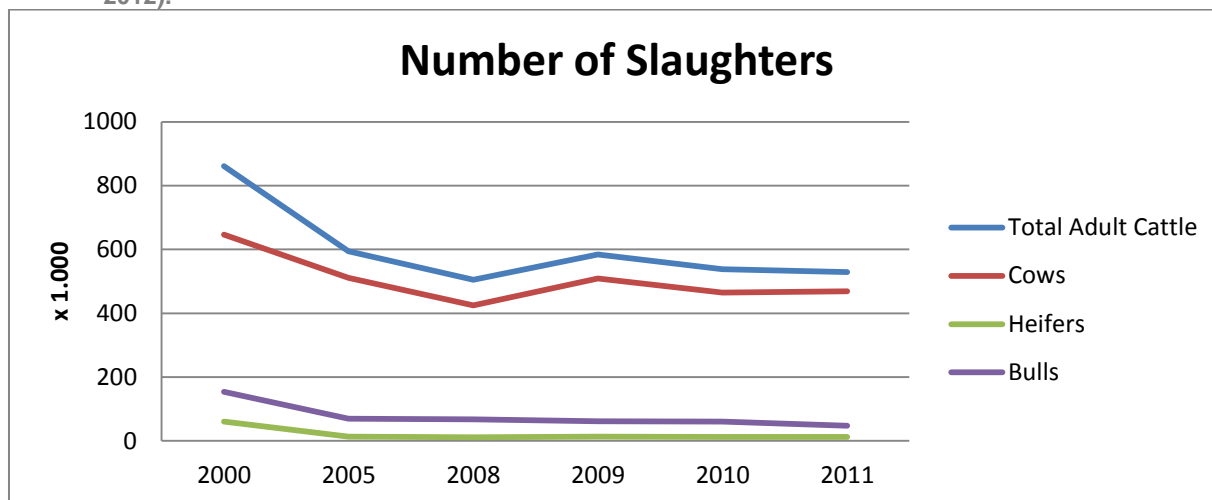
The sector has seen a drop in amount of primary cattle producers over the past ten years (see table 4). A total drop of 33 percent is seen between 2000 and 2012. The number of producing companies is still relatively high due to a large number of companies that are registered but are only holding 5 to 10 beef animals. These 'hobby farmers' lead to a spread out sector. This results into variable qualities in the total supply of beef.

	2000	2005	2009	2010	2011	2012
Number of Companies	20.807	18.150	16.109	15.424	14.312	13.854
Difference in %		-12,8 %	-11,2 %	-4,3 %	-7,2 %	-3,2%

Table 4. Number of beef cattle companies between 2000 and 2012 (CBS^a 2012, CBS^b 2013).

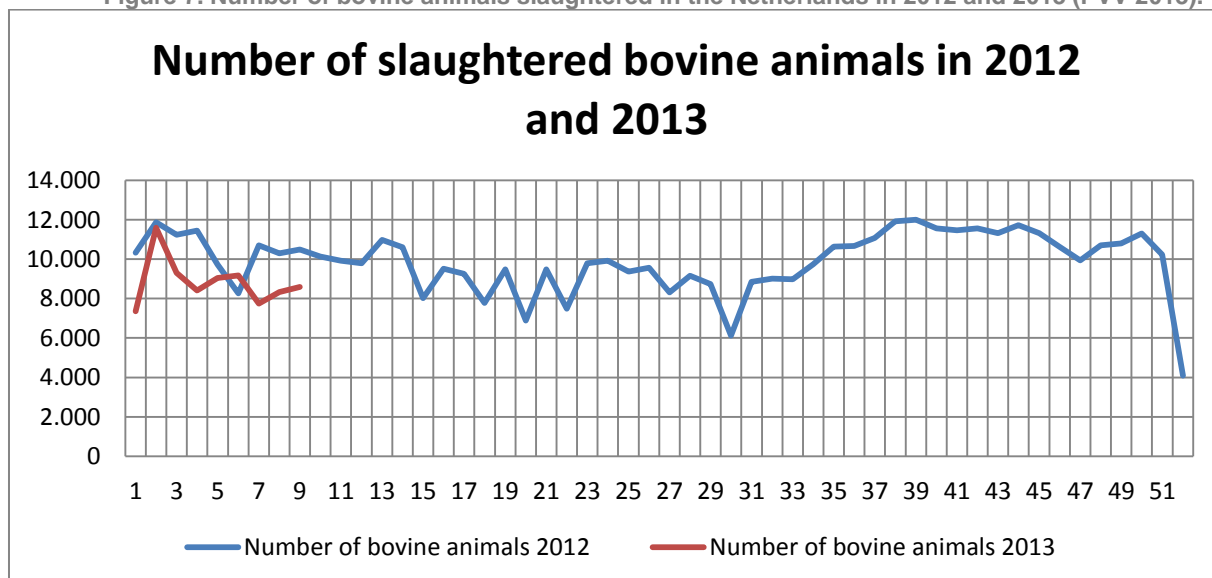
The number of slaughtered bovine animals has declined with 39 percent since 2000 to 514.139 animals in 2011. Slaughtered cows represent the largest group with 88,6 percent of all the slaughters. Bull slaughters are 9,1 percent of the total and heifers represent the smallest segment with 2,3 percent of all slaughters in 2011 (see figure 6) (CBS^c 2012). The number of slaughtered bovine animals saw a slight increase in 2009. This was due to the decreasing milk prices in 2008 and the first half of 2009. Another reason was the increased import of Belgium slaughter cows and the decay of the slaughter premium of € 70 at the end of 2009 (van der Horst 2010). The average weight of a carcass is 319,5 kilograms (PVV 2013).

Figure 6. Number of slaughtered bovine animals in the Netherlands between 2000 and 2011 (CBS^c 2012).



In 2012 the number of slaughtered animals was highest from week 33 to week 50. This is due to a higher consumer demand in the fourth quarter and first quarter of the year (see chapter 2.1). due to the expected abolishment of the milking quota in 2015 dairy producers hang on to their stock leading to a lower amount of animals slaughtered in the beginning of 2013 (see figure 7)(PVV 2013).

Figure 7. Number of bovine animals slaughtered in the Netherlands in 2012 and 2013 (PVV 2013).



Two different quality grading's were used to review the average carcass prices for slaughter cattle in the Netherlands. These are cows with a quality grading of O3 and bulls with a quality grading of R3. Prices dropped in 2009 and 2010 but are increasing in 2011 (figure 8) and in 2012 (figure 9). The average price for R3 bulls was € 3,32 and for O3 cows it was € 2,94. This is 10 to 15 percent higher than in 2011.

The sector is depending on imports of beef and beef products. With a total production of 167.000 tons an additional 117.400 tons is needed to meet the consumer demand of 284.400 tons. This means that 43 percent of the total beef products sold in the Netherlands is imported. The total import of beef and beef products is 347.000 tons of which a large part is packaged and used for export. The total export is 229.000 tons (PVV& PVE 2012).

Figure 8. Average carcass prices in Euro per 100 kilogram of cows (O3) and bulls (R3) in the Netherlands between 2008 and 2011 (European Commission^b 2013).

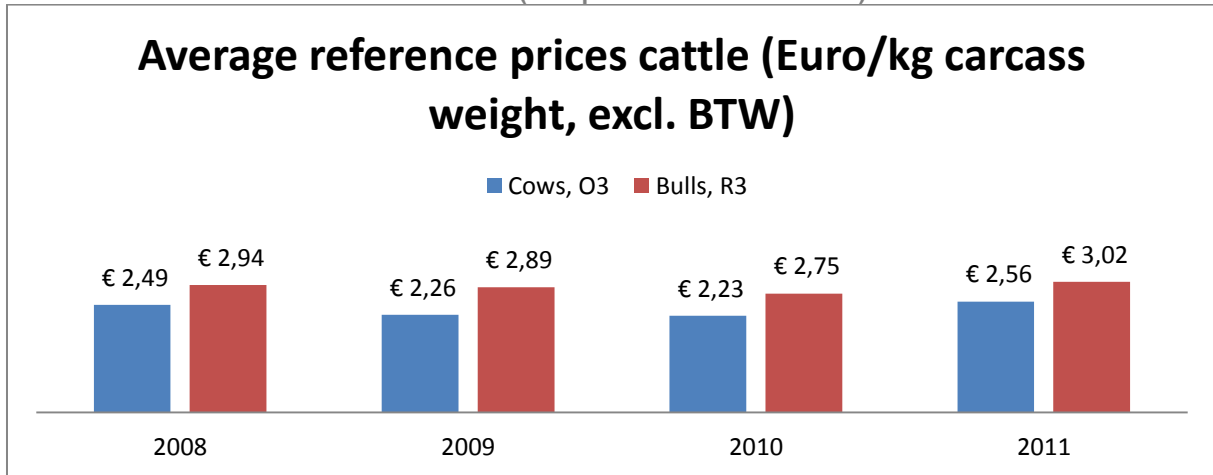


Figure 9. Average reference prices of cattle in Euro per kilogram of cows (O3) and bulls (R3) in the Netherlands in 2012 and 2013 (European Commission 2013).

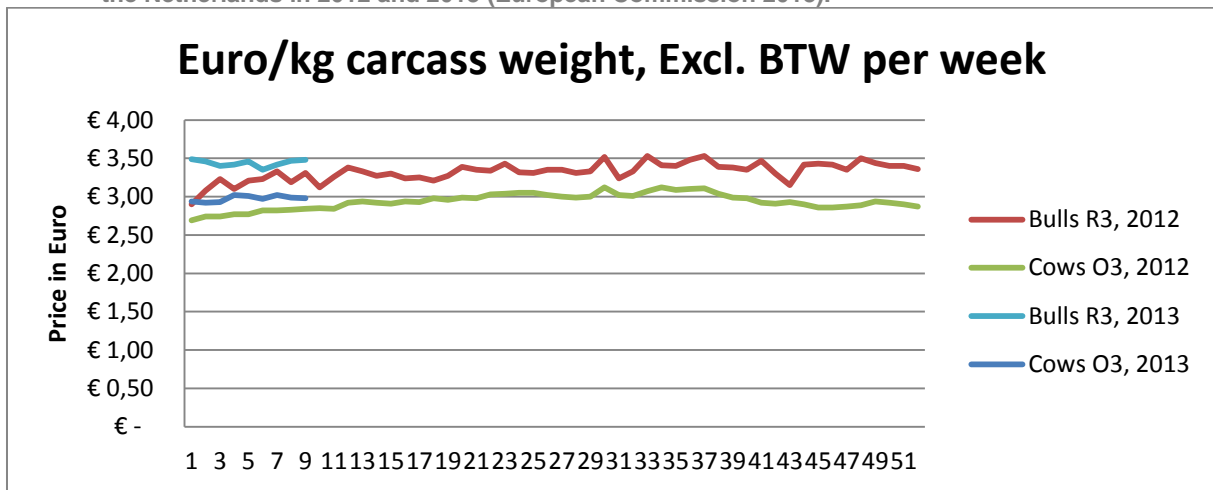
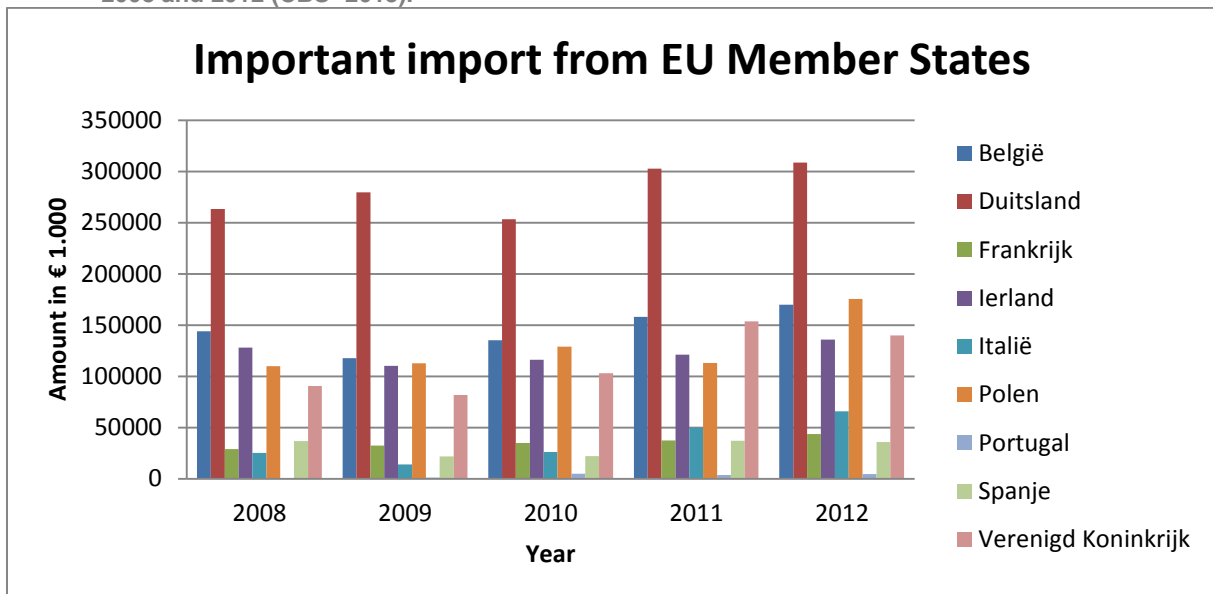
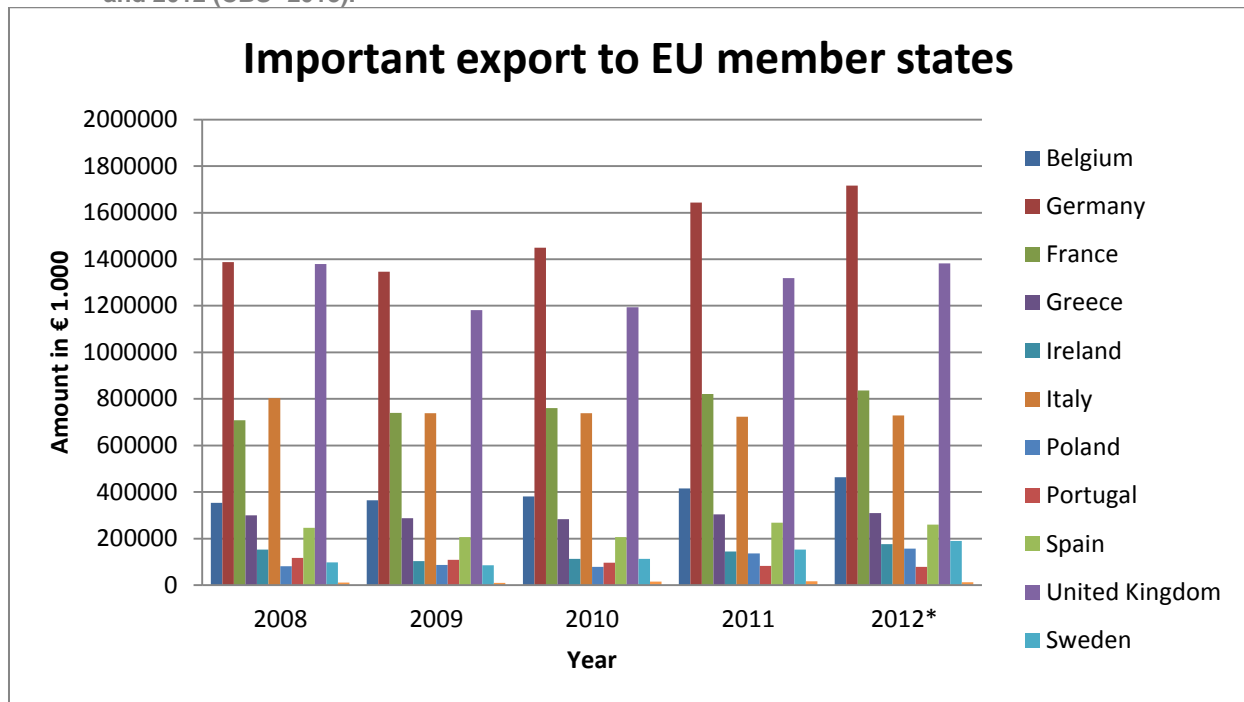


Figure 10. Import value in € 1.000 of beef and beef products from EU member states between 2008 and 2012 (CBS^c 2013).



The largest beef importers are: Germany, Belgium, the UK, and Ireland (see figure 10) (more information in chapter 2.3.2 and annex 3). The largest export countries are Germany with 28,4 percent of the total tonnage. After that the three largest exporting countries are the UK, France, and Italy (figure 11) (CBS^c 2013).

Figure 11. Export value in € 1.000 of beef and beef products to EU Member States between 2008 and 2012 (CBS^c 2013).



Socio- Cultural

The socio cultural analysis will answer part of sub question 8 (chapter 1.1) on the preferred strategies for marketing of Dutch beef. It will describe the behavior of consumers and action preferred by this group of actors in the chain. Meat consumption and beef consumption is decreasing. In 2010 consumers purchased 38.851 tons of beef products. In 2011 this was 35.453 tons (GfK 2011). This is a drop of eight percent. A total of 85,1 kilograms of meat per head was consumed in 2011. 17,2 kilograms consist of beef (see figure 12) (PVV & PVE 2012). The most important reason for reduced consumption is the increase of consumer prices for all meats (beef, pork, and poultry). The differences in consumer prices between 2010 and 2012 are seen in figure 13. The consumer prices for beef increased with at least 10 percent each quarter to €10,87 per kilogram in the third quarter of 2012. Another reason is that supermarkets had less (deep) discounts on meat. Consumers prefer minced beef over the more expensive parts such as steak (GfK 2010, GfK 2012, PVV & PVE 2012).

Sales outlets for meat are rapidly changing. As mentioned in chapter 2.1 consumers prefer supermarkets for the purchase of beef and beef products. According to a market research by GfK (2011) more than 90 percent of the consumers buy meat and meat products in the supermarket. 81 percent of the meat products are sold in a supermarket and 59 percent of meat is sold in the supermarket (PVV & PVE 2012).

Figure 12. Meat consumption in the Netherlands in kg per head (PVV & PVE 2012).

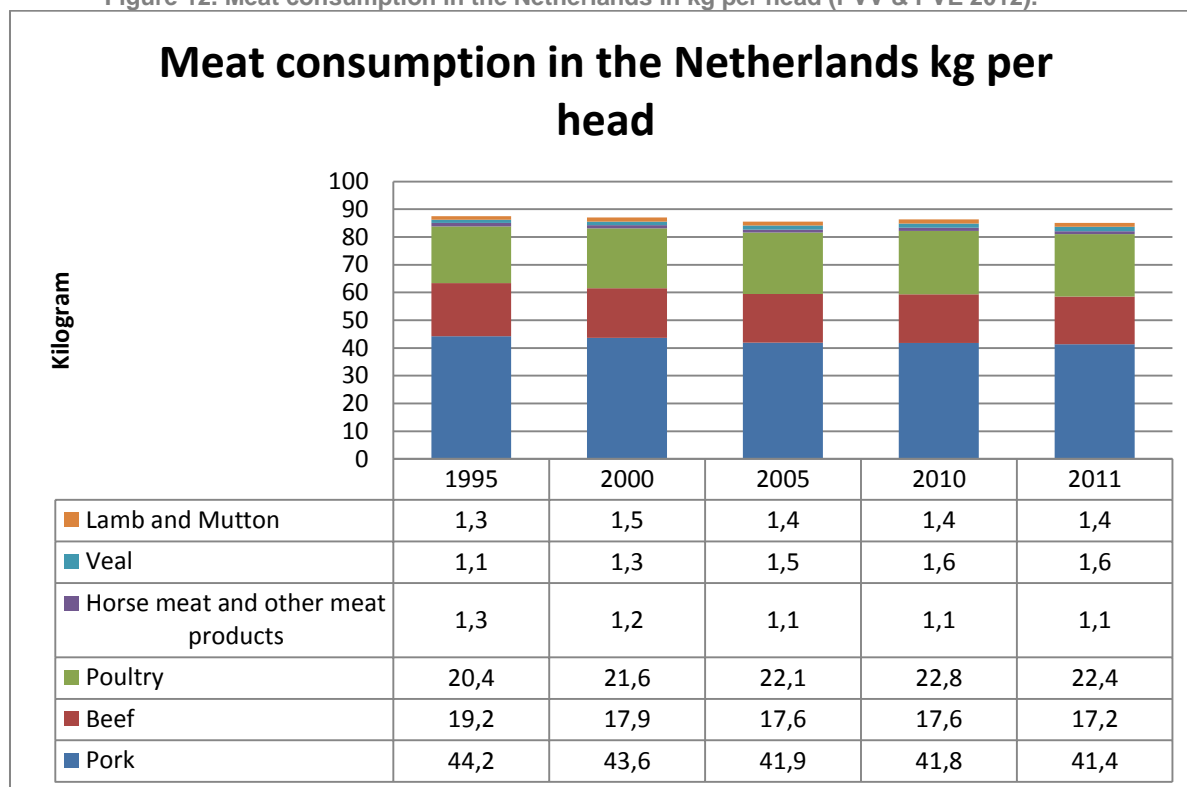
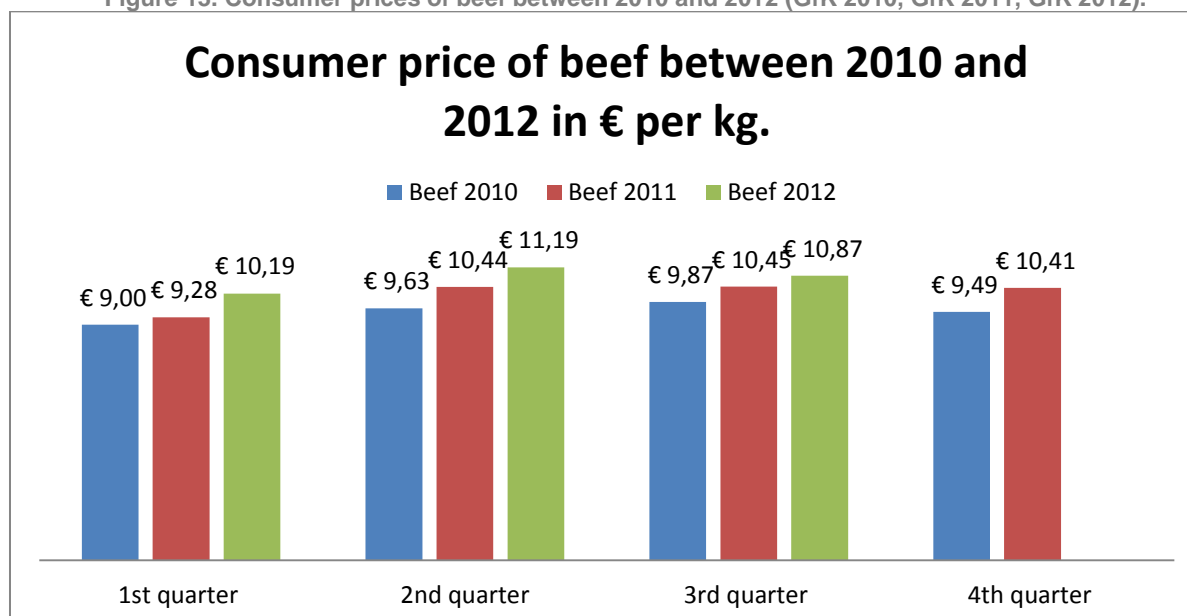


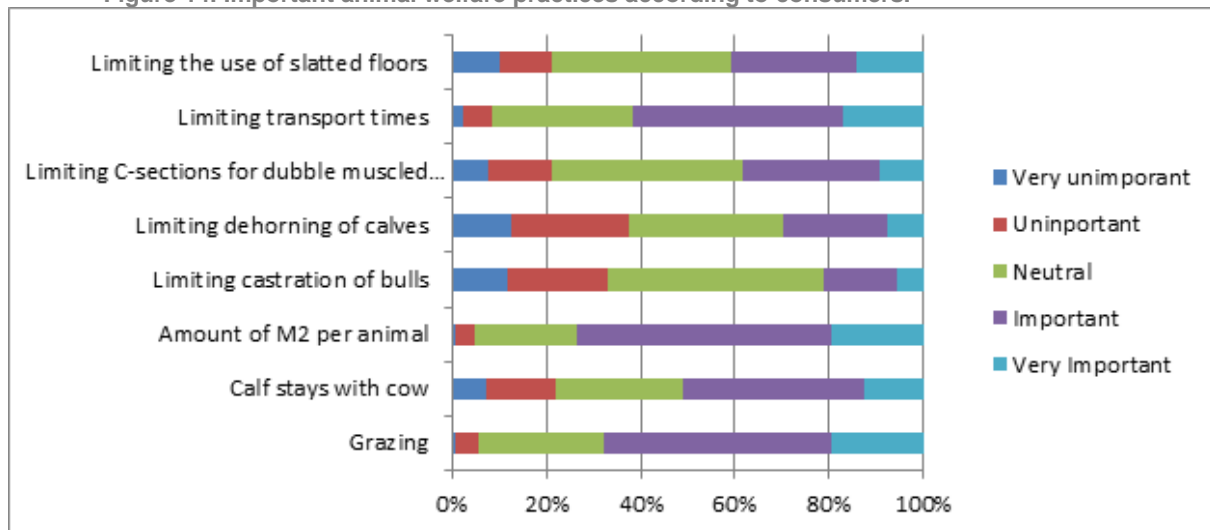
Figure 13. Consumer prices of beef between 2010 and 2012 (GfK 2010, GfK 2011, GfK 2012).



Dutch livestock farmers operate within an urbanized, relatively well educated, and affluent society that has little knowledge and affinity with livestock farming, but that is greatly concerned about the welfare and wellbeing of animals (Raad van Dieraangelegenheden 2012). The welfare of animals is more often associated with healthier meat. Consumers spend € 27,1 million on animal friendly meat products in 2011 which is an increase of almost 14 percent compared to 2010 according to the Monitor Sustainable Food 2011 (EL&I 2012). Consumers consider grazing, size of the pens, and travel restrictions as most important

factors to identify animal welfare (see figure 14 from the results of the questionnaire) (Animal Science Group 2008).

Figure 14. Important animal welfare practices according to consumers.¹⁹



Consumers have a rather black and white image of the animal husbandry system. This means that they believe that the keeping of animals for economical purpose will lead to victims. These are either the animals or the environment. Consumers see the farmer, the industry, and retail as the responsible actors in improving animal welfare and living conditions (Bos, *et al.* 2008). Education will help in reducing this black and white image. The Raad van Dieraangelegenheden suggests two important options:

1. *Education*: improved education on keeping systems starting with basic education at primary educational institutes.
2. *Connecting 'green' and 'grey' education*: improving the link between livestock farming education and important educational institutes of other links in the chain such as catering, food science technology, butchers, and retail (2012).

The current available educational materials often give a wrong image of the industry. An example is a text from primary school materials that state that: "*Often farms fatten one animal species, many animals never come outside, and it is just one big animal factory. We call that the bio- industry*²⁰." This is a good reason why the sector should provide for its own educational materials for primary schools (van der Plas, Nieuwe Oogst 2013).

When transparency is increased the consumers are educated. A research from LEI mentions a top ten of actions to be taken to improve transparency in the sector. These are chosen by consumers as the best options to share information:

1. Fieldtrips for primary or secondary school children to see how farm animals are kept;
2. Walking or cycling through the country side and seeing cattle graze in the fields;
3. Farmers visiting schools to educate primary or secondary school children;
4. Buying food products on a farm;
5. Visiting a farm;
6. Actually walking around on a farm and in the stables;

¹⁹ Incomplete words are: Limiting C-sections for double muscled animals

²⁰ Document:

http://www.nieuweoogst.nu/scripts/edoris/edoris.dll?tem=LTO_PDF_VIEW&doc_id=62283

7. Using recreational facilities on a farm such as miniature farmers golf, birthday parties, bachelor(ette) parties, or hotel and bed and breakfast facilities;
8. Reading and seeing information on a website on how animals are kept;
9. Looking through a window of a stable or barn;
10. Using a webcam to look inside a stable.

The research also concluded that consumers are unfamiliar with the possibilities for transparency in the animal husbandry sector. Consumers also did not want to be brought into contact with the animal behind their meat (Wijk-Jansen, *et al.* 2011).

Technological

The Netherlands is the largest patent applicant in the EU (van Galen 2012). 80 percent of the product innovations and 92 percent of the process innovations are initiated by an agricultural entrepreneur (van Galen 2011). Several of these projects are important to improve animal welfare. In 2010 about 62 percent of the innovations were started on animal health and animal welfare motives (van Galen 2012). However these innovative products do not generally achieve a high market share. The stimulation of animal welfare practices in other sectors such as the roundel housing system for the poultry sector, Comfort Class pens for pigs, bedded pack barns for cows, and Comfort Class transport vehicles will help to increase the market share of the Netherlands on the international market (Raad van Dieraangelegenheden 2012). Almost 50 percent of the entrepreneurs give image improvement of the sector, as one of the main reasons for innovations (van Galen 2012).

Process innovations have overruled product innovations for many years. However the last few years product innovations have been increasing to improve the competitive force of a product. Through local products, inter segmentation; branding and sustainable chain relationships based on speed and service, a niche market can be created (van Galen 2011). These include a variety of quality labels and brands in the sector. These are *Beter Leven kenmerk*, *Scharrelrundvlees*, and organic brands such as BIO, Detmer and EKO. They also include smaller initiatives such as *Natuurvlees*²¹, *Waterlands Weelde*²², *Vleesvee Intergratie Twente*²³, *Limousin regionaal*²⁴, etc. However, only a few of these initiatives will succeed on the market (Raad van Dieraangelegenheden 2012).

Ecological

The quality labels used to identify animal friendly products in the Dutch supermarket are *Beter Leven kenmerk*, *Scharrelrundvlees*, *Waterland Keurmerk*, *Bief Select*, and *Vleesvee Intergratie Twente (VIT)*. This sub chapter will answer sub question 3 (chapter 1.1) on the production requirements of quality labels in the Dutch supermarkets.

The *Beter Leven kenmerk (BLk)* is initiated by the *Dierenbescherming* and ranks the level of animal welfare with one, two or three stars. Three stars are reserved for organic produced products that meet the standards of the Dutch SKAL regulations. The requirements for one and two stars are found in table 5. Furthermore no double muscled beef breeds are allowed (Belgium Blue, Improved Red Pied). The size of the group cannot be larger than 40 animals (excluding youngstock), breeding bulls must have 16 m² laying area and a total of 20 m² including an exercise area. Hot or freeze branding and tail docking is prohibited. Bulls older than one year may be kept inside permanently. A maximum of two percent C-sections is allowed and a routine usage of embryo transplantation or ovum pick up is prohibited.

²¹ General website : <http://www.puurnatuurvlees.nl/>

²² General website: <http://www.natuurvlees.nl/>

²³ General website: <http://www.vitwente.nl/>

²⁴ General website: <http://www.limousin-regionaal.nl/>



																																																								
Control body	Stichting Beter Leven kenmerk (SBLk)	Stichting Beter Leven kenmerk (SBLk)																																																						
Audit freq.	Once a year	Once a year																																																						
Feeding places	1 feed place at feeding fence per 2 bovine animals with a minimum width of 75 cm.	1 feed place at feeding fence per 2 bovine animals with a minimum width of 75 cm.																																																						
Floor	The floor can have a maximum slope of 10%. Plus animals that are kept inside must have, at all times, access to a lying area with a solid floor, <u>and</u> a soft lying area of straw, wood shavings, or rubber.	The floor can have a maximum slope of 10%. Plus animals that are kept inside must have, at all times, access to a lying area with a solid floor, <u>and</u> a soft lying area of straw, wood shavings, or rubber.																																																						
Tethering	Tethering and stanchion barns are prohibited.	Tethering and stanchion barns are prohibited.																																																						
Castration	By a veterinarian with anesthetics and pain medication afterwards	By a veterinarian with anesthetics and pain medication afterwards																																																						
Dehorning	Only the first 5 weeks of life by a veterinarian using anesthetics and pain medication afterwards	Only the first 5 weeks of life by a veterinarian using anesthetics and pain medication afterwards																																																						
C- Sections	Not routine max. of 2 % of the herd can deliver a calf using a C-section	Not routine max. of 2 % of the herd can deliver a calf using a C-section																																																						
Weaning	At age of 3 months (Blaarkop / Lakenvelder at age of 14 days)	At age of 5 months																																																						
Grazing	150 days a year, 8 hours per day	180 days a year 12 hours per day																																																						
Finishing	1/5 part of total life. Max. of 5 months	1/5 part of total life. Max. of 4 months																																																						
Traveling	At a minimum age of 3 months, 8 hours or 500 km.	At a minimum age of 5 months, 8 hours or 500 km.																																																						
To slaughter	Maximum of 4 hours or 250 km	Maximum of 4 hours or 250 km.																																																						
Space requirements	<table border="1"> <thead> <tr> <th>Weight(kg)</th> <th>In filled</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Up to 200</td> <td>1.25m²</td> <td>2.50m²</td> </tr> <tr> <td>201-300</td> <td>1.75m²</td> <td>3.50m²</td> </tr> <tr> <td>301-400</td> <td>2.60m²</td> <td>3.80m²</td> </tr> <tr> <td>401-500</td> <td>3.00m²</td> <td>4.20m²</td> </tr> <tr> <td>501-600</td> <td>3.40m²</td> <td>4.60m²</td> </tr> <tr> <td>601-700</td> <td>3.60m²</td> <td>5.00m²</td> </tr> <tr> <td>701-800</td> <td>4.00m²</td> <td>5.40m²</td> </tr> <tr> <td>+ 800</td> <td>80 % of total inside</td> <td>+0,40m²/100 kg</td> </tr> </tbody> </table>	Weight(kg)	In filled	Total	Up to 200	1.25m ²	2.50m ²	201-300	1.75m ²	3.50m ²	301-400	2.60m ²	3.80m ²	401-500	3.00m ²	4.20m ²	501-600	3.40m ²	4.60m ²	601-700	3.60m ²	5.00m ²	701-800	4.00m ²	5.40m ²	+ 800	80 % of total inside	+0,40m ² /100 kg	<table border="1"> <thead> <tr> <th>Weight(kg)</th> <th>In filled</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Up to 200</td> <td>1.25m²</td> <td>2.50m²</td> </tr> <tr> <td>201-300</td> <td>1.75m²</td> <td>3.50m²</td> </tr> <tr> <td>301-400</td> <td>2.90m²</td> <td>4.40m²</td> </tr> <tr> <td>401-500</td> <td>3.30m²</td> <td>5.00m²</td> </tr> <tr> <td>501-600</td> <td>3.70m²</td> <td>5.60m²</td> </tr> <tr> <td>601-700</td> <td>4.00m²</td> <td>6.00m²</td> </tr> <tr> <td>701-800</td> <td>4.40m²</td> <td>6.60m²</td> </tr> <tr> <td>+ 800</td> <td>60% of total inside</td> <td>+0,60m²/100 kg</td> </tr> </tbody> </table>	Weight(kg)	In filled	Total	Up to 200	1.25m ²	2.50m ²	201-300	1.75m ²	3.50m ²	301-400	2.90m ²	4.40m ²	401-500	3.30m ²	5.00m ²	501-600	3.70m ²	5.60m ²	601-700	4.00m ²	6.00m ²	701-800	4.40m ²	6.60m ²	+ 800	60% of total inside	+0,60m ² /100 kg
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Table 5. Animal welfare requirements for primary producers for Beter Leven ster 1 and Beter Leven ster 2 (Dierenbescherming^a 2011, Dierenbescherming^b 2011).

The certification of the label is done by several certifying agencies that are certified by *Stichting Beter Leven kenmerk (SBLk)*. These agencies are accredited according to ISO 450111 for several labels and quality schemes and also audit for IKB-rund and SKV. They

are not accredited for certifying *BLK*²⁵. There are four different types of inspections for the verification and safeguarding of the label. These include the:

- *Entry audit*: inspection before the quality label is issued;
- *Yearly audit*: an issued label is valid for a period of one year. Two months before the end date a yearly audit has to be performed;
- *Compliance audit*: when non compliance is registered during the yearly audit an extra audit is held to check the changes made in the production system;
- *Shadow audit*: announced or unannounced audit commissioned by the *SBLK*.

The only primary Dutch beef producer certified under this label for two stars is Henk Broeders, imitator of Bief Select (see also this chapter page 36).

The label *Scharrelrundvlees* identifies animal friendly suckler cow production where animals are kept in groups, are fed high quality feed and can graze outside²⁶. The label started in 1999 and has around 30 participating primary producers. The certification of this label is done by *PROduCERT* who is also responsible for auditing for France Limousin, Maatlat Duurzame Veehouderij, and several pork and poultry labels²⁷. A number of requirements are laid down for primary producers. These include the following:



- Transport between companies or to a slaughterhouse cannot be longer than 4 hours;
- Amputation, castration, embryo transplantation, and genetic modification or cloning are prohibited;
- Calves are weaned from their mother at 20 weeks of age;
- The grazing period is between May and September with a land availability of 500 m² per GVE (Livestock Units):
- Fully slatted floors are prohibited;
- Tethering of animals is prohibited (unless veterinary treatment requires);
- The requirements for the laying areas are mentioned in table 6.

Type of animal	Size
Cow with calf	6m ²
Pregnant cows	4m ²
Meat bull / female youngstock <1 year	2,5m ²
Meat bull / female youngstock 1 – 1,5 years	3,25m ²
Meat bull/ female youngstock > 1,5 years	4m ²
Breeding bull	20m ²

Table 6. Surface area required for the production under the *Scharrelrundvlees* label (*PROduCERT* 2001).

The application starts with a preliminary audit. When found suitable for this label announced or unannounced inspections are carried out on primary production facilities twice a year. In case of non compliance sanctions can include a written reprimand, an additional audit (cost for offender), stricter audits by doubling the amounts of inspections, and termination of participation for a maximum of five years (*PROduCERT* 2001).

²⁵ This is not found on the database of Raad van Accreditatie on the website: <http://www.rva.nl/search/>

²⁶ General information from: <http://www.producert.nl/index.php>

²⁷ General information about *Scharrelrundvlees*: <http://www.scharrelvlees.net/scharrelrund.php>

The label *Bief Select* is an initiative by Henk Broeders and is based on an old fashioned and honest quality of beef. The European Commission has acknowledged this label as a 'European Quality Beef'. The production is based on honest, safe, healthy, durable, and animal friendly production without the use of antibiotics. It is a local product that can be bought nationally²⁸. About 40 primary producers are connected under this label. Abattoir Ebergen in Lith (the Netherlands) slaughters all animals. The wholesaler is Meatfriends in Roosendaal. Supermarkets connected to this label are C1000 (in Alphen aan den Rijn), Marqt (in Den Haag and Amsterdam, and MCD supermarkets. The requirements for producers are not documented but include the following:

- Only Blonde d'Aquitaine, Limousin, and Piemontese breeds are allowed;
- Only male cattle is allowed;
- All animals suckle for a year (including three months of quarantine necessary for the import of calves from France).



Most of the calves are imported from France. A small amount of calves come from primary producers in the Netherlands and Belgium. The reduced Food Miles are important in this label. No artificial fertilizer is used and beef is slaughtered and sold in the Netherlands. *Bief Select* sees itself as open and transparent "We want to let our customer know where their beef came from²⁹." As mentioned before Henk Broeder is the only one who is certified under *BLk* with two stars. Not all companies connected to *Bief Select* are certified. However they do produce according to the requirements from *BLk*.

The *Stichting Keurmerk Waterland* represents a regional product from the peat lands of North-Holland. They are responsible for auditing producers under the label *Waterland's Weelde*. This label guarantees the origin of beef and an environmental and animal friendly production. It is supported by the Foundation Landscape North Holland (Stichting Landschap Noord Holland) and the Association of Nature Monuments (Vereniging Natuurmonumenten) for the conservation of peat land. There are about 20 beef producers under this label³⁰. A short list of requirements is laid down by *Stichting Keurmerk Waterland*. Blonde d'Aquitaine is the breed used for beef production. Other requirements include:

- Animals should graze at least 120 days per year;
- During winter animals are housed in deep litter;
- Embryo transplantation is prohibited
- All participating producers should have an IKB certificate.



Producers are audited yearly. A month is given after the audit to improve deficiencies. Producers are expelled from this label when non compliance is registered after the improvement period.

²⁸ Information from the general website: <http://www.biefselect.nl/>

²⁹ Telephone interview with Henk Broeders (2012)

³⁰ Information from the general website: <http://www.natuurvlees.nl/?p=436>

The label *Vleesvee Intergratie Twente (VIT)* processes 80 bovine animals each week and supplies several butchers, caterers, wholesalers, and independent supermarkets. Next to this they also grow their own animals. About 150 companies are contracted through *VIT*. 30 of these are fattening farms. The *VIT* functions as a wholesaler and directs breeding and fattening companies in the Netherlands and neighboring countries. Cattle are raised until 15 months of age after which they are transported to fattening farms (Meuwissen, de Haan & Beijers 2010). The requirements for the primary producers include:

- Breeds must be Blonde d'Aquitaine or Belgium Blue;
- Cattle grazing period is between May and September
- Finishing cattle is done in groups on deep litter or in a slope stable;
- Calves stay with their mother.



2.2.1.1 Summary PESTEL analysis

The PESTEL analysis on the Macro environment of the Dutch beef producing sector mentioned several dynamics and developments that can be divided into positive developments and negative developments for the sector. The most important developments are mentioned below.

Positive developments:

- There are no specific regulations regarding animal welfare for the keeping of bovine animals on a national level or a European level;
- The carcass prices for beef cattle are increasing;
- Consumer prices are increasing and supermarkets have less (steep) discounts on meat and meat products;
- Animal welfare is highly important in today's society;
- Consumers desire more transparency in animal production;
- Supermarkets sell the most beef and beef products. Consumers tend to purchase beef here also.

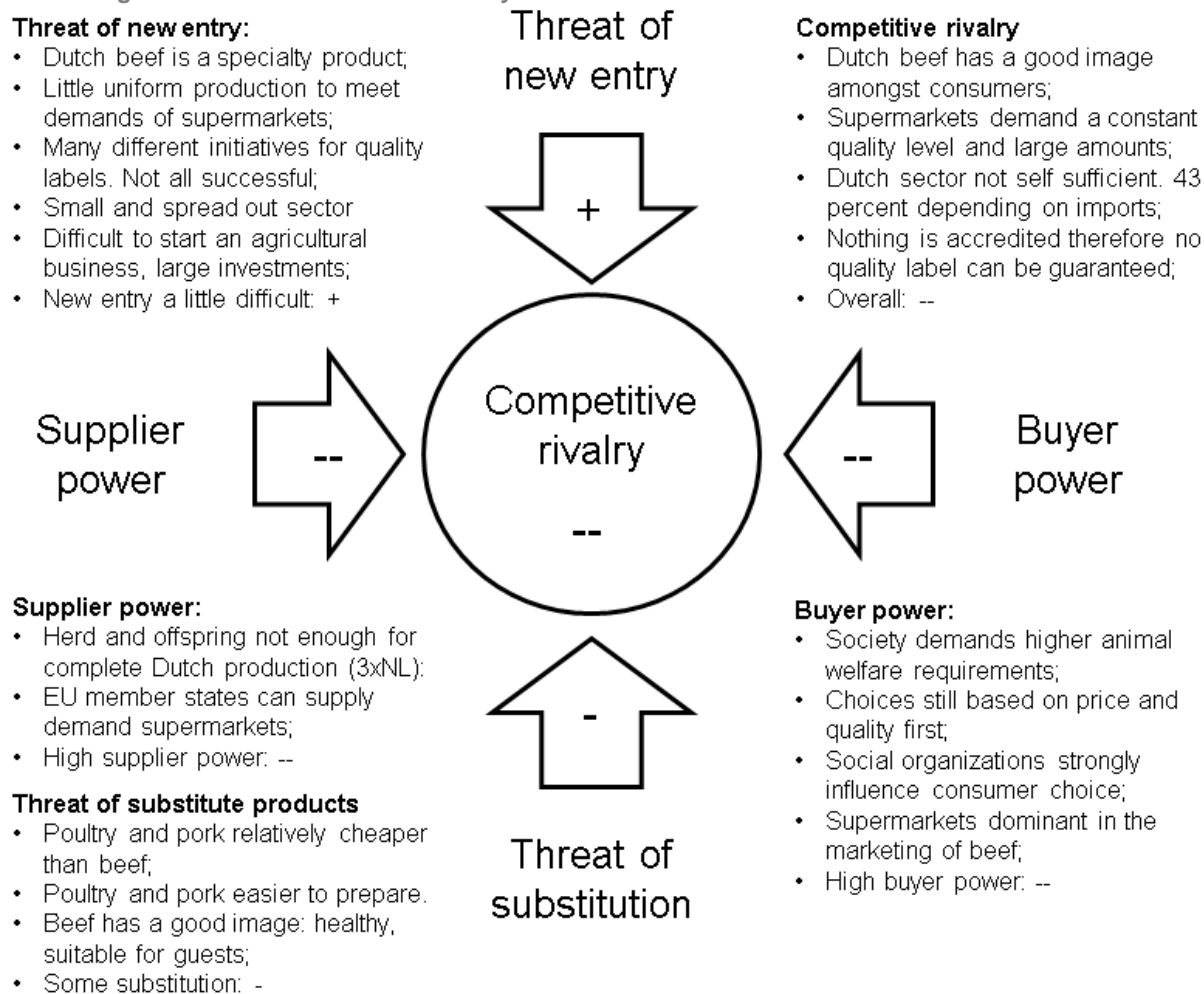
Negative developments:

- The amount of beef and pasture cattle is decreasing. Veal calves are the largest part of the production. Dairy cows are the second largest. Quality beef production is only a small part of the total production;
- Quality beef farming is a spread out sector in the Netherlands with a large number of companies only keeping 5 to 10 animals. This leads to irregular qualities of beef;
- The Netherlands only produces enough to meet 57 percent of the demand of beef. Therefore they are depending on imports;
- Meat purchases per household are decreasing due to high prices and changing consumption patterns (easy to prepare, healthy, convenient);
- Price and quality of beef are more important than animal welfare.

2.2.2 Micro environment of the Dutch beef sector

The Porter's Five Forces analysis describes the Micro environment and to determine the attractiveness of the national market for Dutch produced beef. The power of the supplier and buyer is analyzed and strengthened by the results of the questionnaire. The threat of substitute products includes pork, poultry, fish, and meat substitutes. The threat of new entrance to the beef producing market and the competitive advantages and disadvantages of Dutch beef. Figure 15 shows the full analysis. The different forces and their developments are described below the figure, resulting in a conclusion on the attractiveness of the market.

Figure 15. Porter's Five Forces analysis.



Supplier power

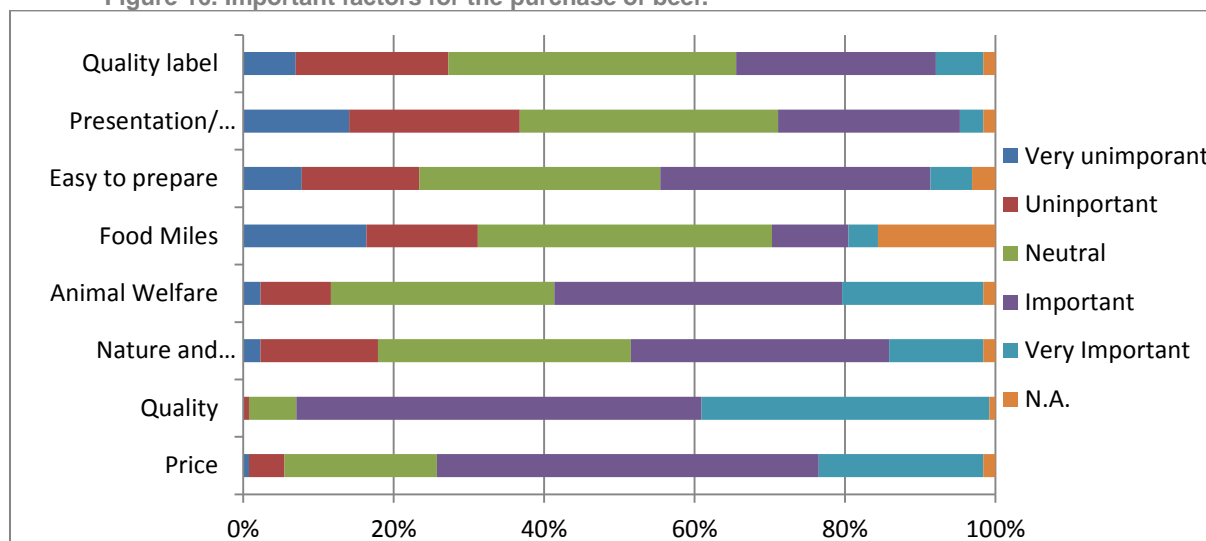
Primary producers are depending on calves from neighboring countries for the fattening for quality beef. The sector in the Netherlands is too small to produce enough offspring to continue the fattening stage. Dairy calves are mostly used for replacement stock or veal production (which contains 73 percent of all slaughters as mentioned in chapter 2.2.1(P. Lutke-Veldhuis during the symposium of 3 April 2013. See also annex 4).

Animal welfare is important for consumers (figure 14 in chapter 2.2.1). However price is a more important factor (see figure 16). Import products are often sold cheaper because countries such as Ireland or the UK have 'economies of scale' where they can produce large amount of a uniform quality. Supermarkets therefore prefer imported beef (see also chapter 2.3.2).

Buyer power

Society demands higher animal welfare requirements of beef products. However their purchasing choices are still based on quality and price before animal welfare is an issue. This is seen in the results of the questionnaire (figure 16).

Figure 16. Important factors for the purchase of beef.³¹



The consumption of beef is also influenced by the marketing and campaigning of social organizations such as the *Dierenbescherming* and *Wakker Dier*. This is seen in the fact that *Beter Leven kenmerk* from the *Dierenbescherming* (with 44 percent) is the most well known quality label used to identify animal welfare. The second place is *Scharrelrundvlees* (with 36 percent) a former label from the animal protection services. Over half of the consumers do not specifically choose a quality label when they purchase beef. When they do, 37 percent chooses *BLK*, making this label the largest in the Netherlands (see annex 2).

Supermarkets have been dominant in the marketing of beef ever since the 1980's (Beekman, Prink & van Smet 2010). They influence consumers through commercials, advertisements, packaging, and labeling. Chapter 2.2.1 mentioned that most consumers purchase beef and beef products in the supermarkets. This results in a high target market for the supermarkets. The questionnaire results also show that 48 percent of the respondents wishes to be informed about Dutch beef in the supermarkets. Other marketing methods include television commercials and advertising brochures of supermarkets (see annex 2).

Competitive rivalry

Beef has a good image amongst consumers. It is seen as a product that is thoroughly checked and audited. It is particularly popular amongst the elderly. It tastes good, is suitable for guests and for special occasions (GfK 2009). The sector also has a low usage of antibiotics (Chairman Moonen). The start of MediRund on 1 January 2012 makes it obligatory for all beef producers to register all usage of antibiotics³². The questionnaire also shows that consumers see Dutch produced beef as a product of good quality that is healthy and that is produced under good animal welfare practices (see annex 2). Several negative factors are playing in the sector. These include the structural use of C-sections on double muscled breeds (Belgium blue and Improved Red Pied). Several projects are running to improve natural birth (*'Natuurlijke Luxe'* and *'Geboorte Gemak Vleesvee'*) (ten Napel, *et al.*

³¹ Incomplete words are: Presentation/ Packaging, Nature and Environment.

³² See also the MediRund website: <http://www.medirund.nl>

2012). However C-sections are not yet seen as an issue by the consumers. It may turn into an issue when surrounding countries are active on it and social organizations such as the *Dierenbescherming* and *Wakker Dier* decide to campaign on these matters (Chairman Moonen). Other recent issues have been the horse meat scandal in the EU where many supermarkets have removed their frozen meals and meat products because it contained horse meat (Brond, 2013). More recently, 13 percent of beef (steak) in the supermarkets have been contaminated with the ESBL bacteria.³³ These situations might harm the beef producing industry.

As mentioned in chapter 2.1 supermarkets need a constant quality level throughout the year especially the larger supermarket chains such as Albert Heijn, Jumbo, and C1000. The fact that the sector is spread out, not uniform, and depending on imports to meet the demand, means that others can provide sufficient amounts. This means that the force of competitors, especially foreign importers, is higher than that of the Dutch sector. Smaller supermarkets (those from Superunie) need a smaller volume and are the only group that the Dutch beef producers can produce for.

Another negative factor is the fact that none of the quality labels are accredited under the Dutch board of accreditation (*Raad van Accreditatie*). The only accredited system is SKAL³⁴ for organic production. Several organizations that audit for the labels mentioned in chapter 2.2.1 are accredited (e.g. PROduCERT³⁵) however they are not accredited for that specific beef label. Therefore none of the labels can be guaranteed on conformity of the management system, technical competence or the unbiased auditing of producers. Combining these factors mentioned above means that the Dutch beef producers have an instable competitive force on the market.

Threat of substitute products

Substitute products are popular amongst consumers. Only 20 percent of the meat consumed is beef. The largest competitors are pork (49 percent of the total meat consumed) and poultry (26 percent of the total meat consumed) (PVV & PVE 2012). These differences are mainly due to the price. Pork and poultry are cheaper than beef (see figure 17) this while price has been one of the leading factors of consumption patterns (de Bakker & Dagevos 2010).

Pork has a large selection of products available, is easy to prepare, and easy to get from specialty stores and retailers. On the other hand pork is also related to hormones and is not seen as an exclusive product which lacks in animal welfare practices. Poultry is suitable for many different meals, is easy to prepare, and has a varied selection available which is suitable for guests. On the other hand poultry production is animal unfriendly and has negative environmental impacts (GfK 2009).

Consumer trends show that less meat is consumed per week and meat substitutes become more popular growing from 27 million euros spend in 2001 to 62 million euros spend on the product in 2009. However this market for substitutes is still a fraction compared to meat products (a total of 5,5 billion euros spend). Consumers, especially those with a higher income and/or education level, more often choose to have 'meatless days' in their diet (van Bakker & Dagevos 2010).

³³ From the PVE website:

<http://www.pve.nl/pve?waxtrapp=pnbuUsHsuOnbPTEcBIBKHF&context=nfMsHsuOnbPTEC>

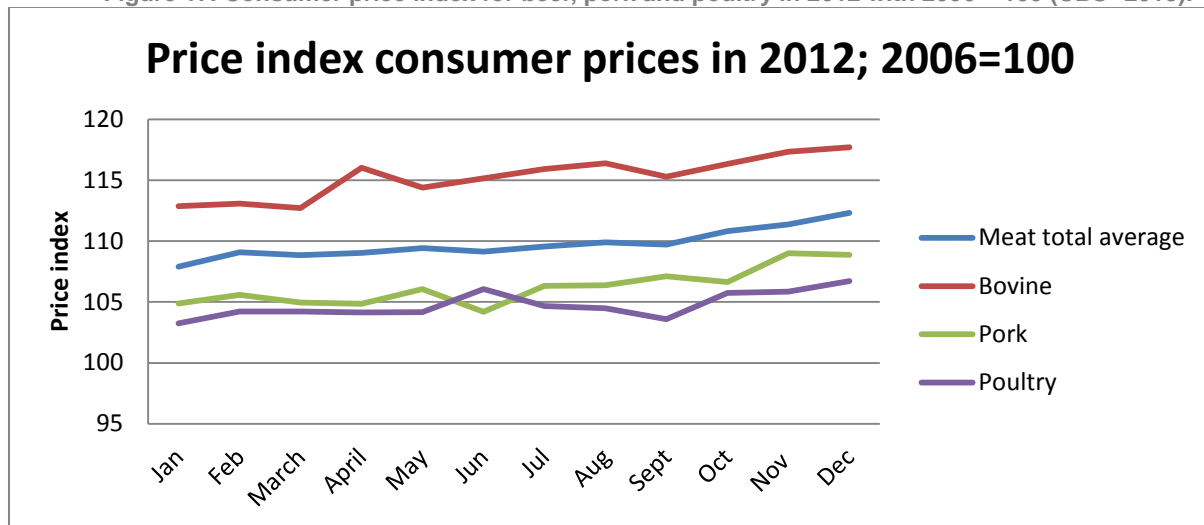
³⁴ The accreditation certificate of SKAL:

http://www.rva.nl/uri/?uri=AMGATE_10218_1_TICH_R8760222947715

³⁵ Accreditation certificate of PROduCERT:

http://www.rva.nl/uri/?uri=AMGATE_10218_1_TICH_R9329316463477

Figure 17. Consumer price index for beef, pork and poultry in 2012 with 2006 = 100 (CBS^a 2013).



Next to the positive factors mentioned in 'competitive rivalry', beef is seen as a product that is checked thoroughly which is suitable for special occasions. However it takes a lot of time to prepare, is difficult to prepare, and is not suitable for a large number of meals (GfK 2009). It is a specialty product.

Threat of new entry

The 'threat of substitute products' mentions that beef is a specialty product produced under the highest animal welfare standards. The case study in chapter 2.3.3 will confirm this statement. However, small companies and little uniformity make it easier for entrepreneurs to improve this. As a result many different quality labels are set up to create a market for a special type of breed or specific welfare practices. The fact that none of these labels are accredited (see competitive rivalry) means that it is easy for a newcomer to set up a new label.

In the past few decades agricultural holdings have undergone up scaling, leading to a decrease in companies. Starters need high capital investments and take overs become more difficult (Bureau Bartels B.V. 2011). The applications in higher education show that agriculture is a 'dying sector'. Just two percent of all students apply for an agricultural education. This is lowest number from all sectors (HBO 2008). So if an entrepreneur is already active in the sector it is easy to set up a quality label or marketing strategy to promote Dutch beef. However it is rather difficult to start a business in the beef sector.

2.2.2.1 Summary Porter's Five Forces analysis

The Dutch beef producers are situated on a very difficult market. The analysis in figure 15 shows the supplier power, buyer power, and competitive rivalry as strong forces negative for the producers. The main problem is the insufficient beef production to meet the total demand plus the diversity in the sector making it difficult to produce a uniform and constant quality animal. Even though there is a good image and superior animal welfare practices which are important for consumers, the fact that none of the quality labels are accredited (and thus guaranteed) give the sector a bad competitive position on the market. Quality and price remain the leading aspects for beef purchases. Supermarkets are dominant in the marketing and pricing of this beef. The threat of substitute products also exists because consumer seek products that are easy to prepare and cheap. Next to minced beef (which is not considered quality beef) pork and poultry are important and is a weak force because quality (Dutch) beef is considered a specialty product.

This micro analysis could furthermore identify the following positive developments and negative developments.

Positive developments:

- Good image of beef produced in the Netherlands (low use of antibiotics, thoroughly checked, grazing and nature conservation, etc.);
- Many different initiatives available on the market to identify good animal welfare practices;

Negative developments:

- The sector is for 43 percent depending on imported beef to meet the demand of the Dutch consumers;
- The sector is diverse and spread out. They cannot fatten a large amount of cattle within a uniform quality range throughout the year to supply (large) supermarkets;
- No quality labels for animal welfare practices in the Netherlands are accredited and therefore they are not guaranteed;

2.2.3 Summary Dutch beef sector analysis (B)

The Dutch beef sector analysis answered sub question 1, 2, 3, and 8 (some partially). The sector is small. Only 31 percent of the herd is beef and pasture cattle. Leaving the veal calves out means that the 'quality beef sector' is only 8,4 percent of the total herd. These numbers are decreasing yearly. Due to up scaling the amount of companies are also decreasing. Average carcass prices have been increasing and are at € 3,50 (R3 bulls) and €2,97 (O3 cows) at the beginning of 2013. The sector can only produce enough to meet 57 percent of the beef demands. Therefore they are depending on the largest importing countries: Germany, Belgium, the UK, and Ireland (sub question 1).

Only general legislation on animal welfare exists for beef cattle. Figure 4 in chapter 2.2.1 gives a clear overview. The only specifications are mentioned in the Dutch *Ingrepenbesluit* and *Regeling toegelaten handelingen* on the mutilations permitted on bovine animals. These include identification methods, dehorning, nose rings, removal of super numeral teats, and castration (see annex 1) (sub question 2).

Quality labels available in the supermarkets are *BLk*, *Scharrelrundvlees*, *Waterland Keurmerk*, *Bief Select*, and *VIT*. These last three are not documented well enough to give an honest comparison. The first two will be analyzed further in chapter 2.3.3 (sub question 3).

Consumers purchase most meat (products) in the supermarkets. Supermarkets are also dominant in the marketing of beef. They have a large influence on the price. Consumers also wish to be informed in supermarkets or through television commercials and advertising brochures of supermarkets. Transparency of the sector is also wanted. The most popular actions are: field trips for primary and secondary school children, walking and cycling through nature where animals graze, a farmer visiting a primary school and education children, buying food on a farm, and visiting a farm (sub question 8).

The conclusions of the PESTEL and Porter's Five Forces analysis mentioned several opportunities, threats, strengths, and weaknesses. The most important points will be used for the SWOT analysis in chapter 2.4. These points are:

Positive development in the micro environment:

- The sector and beef as a product has a good image amongst consumers (healthy, low use of antibiotics, thoroughly checked);
- The sector is active in promoting their good practices. There are many different initiatives for quality labels identifying good animal welfare practices on the market.

Negative development in the micro environment:

- The sector produces enough beef to meet 57 percent of the consumer demand. This means that they are depending on imports (43 percent);
- The sector is diverse and spread out leading to irregular qualities, no uniformity in the products, and no economies of scale;
- The quality labels used to identify good animal welfare practices in the Netherlands are not accredited. Their system and unbiased auditing can therefore not be guaranteed.

Positive development in the Macro environment:

- Good animal welfare practices are important in today's society. Consumers spend more money on animal friendly products each year;
- Consumers desire more transparency of the sector through education and information;
- Most consumers buy their meat (products) at the supermarkets. Supermarkets are dominant in the marketing and pricing of beef.

Negative development in the Macro environment:

- The quality beef production is a small sector in the Netherlands. Cattle numbers and beef producing companies are decreasing each year;
- Meat purchases per household are decreasing each year. Consumption patterns are changing to easy to prepare products and 'meatless days';
- Quality and price are the leading factors for the purchase of beef and beef products.

2.3 Analysis of the most important beef importers (C)

The sector is depending on imports making Germany, Belgium, the UK, and Ireland the most important competitors for the sector (chapter 2.2). To analyze these countries and to answer sub questions 1, 2, 3, and 4 (chapter 1.1) the legislation on animal welfare, the market and economical situation, and quality labels are analyzed. From each importing country the most important quality labels on animal welfare (see table 7)(that are chosen based on conversations with policy advisors during the Copa-Cogeca meeting on 26 and 27 of November 2012) are analyzed including the two Dutch labels *Beter Leven ster 1* and *Scharrelrundvlees* in a case study (chapter 2.3.2).

Label	Country
<i>Red Tractor</i>	The United Kingdom
<i>Freedom Foods</i>	The United Kingdom
<i>Beef and Lamb Quality Assurance scheme</i>	Ireland
<i>Meritus</i>	Belgium
<i>QS- Qualitätssicherung</i>	Germany

Table 7. Quality labels used for the case study of chapter 2.3.2.

2.3.1 Animal welfare legislation in the importing countries

Legislation on animal welfare throughout the EU is based on *Council Decision 78/923/EEC* and *Council Directive 98/58/EC*. To be able to answer sub question 2 (chapter 1.1.) the animal welfare legislation of Germany, Belgium, the UK, and Ireland are given. No specific legislation exists for beef cattle. The only differences arise in the legislation on surgeries and mutilations. These differences will be analyzed in this chapter. The legislation on animal welfare in the importing countries is mentioned in figure 18. Specifications on the contents of the regulations are mentioned in annex 3.

The introduction mentioned that differences exist in the mutilations allowed in each country and the use of anesthesia or sedatives during these mutilations. The procedures that are allowed without anesthesia are mentioned in table 8.

	Country	Anesthesia/ Sedatives	Method used	Age limit
<i>Castration</i>	Germany	No	(elastic ring prohibited)	4 weeks
	Belgium	Yes	-	-
	The United Kingdom	No	-	2 months
	Ireland	No	Rubber rings	1 week
<i>Disbudding</i>	Germany	No	(elastic ring prohibited)	6 weeks
	Belgium	Yes	-	-
	The United Kingdom	No	Chemical cauterization	-
	Ireland	No	Heated iron	2 weeks
<i>Dehorning</i>	Germany	Yes	-	-
	Belgium	Yes	Only when necessary	-
	The United Kingdom	No	-	-
	Ireland	Yes	-	-

Table 8. Mutilations allowed without the use of anesthetics.

Figure 18. Legislation on animal welfare in largest importing countries.

	General Legislation Animal Welfare	Transportation
DE	Tierschutzgesetzes Tierschutz-Nutztierhaltungsverordnung	Tierschutztransportverordnung
BE	Wet betreffende de bescherming en het welzijn der dieren Koninklijk besluit inzake de bescherming van voor landbouwdoeleinden gehouden dieren Koninklijk besluit betreffende de toegestane ingrepen bij gewervelde dieren	
UK	Animal Welfare Act 2006; The Welfare of Farmed Animals (England) Regulations 2007 The Welfare of Farmed Animals (Wales) Regulations 2007 The Welfare of Farmed Animals (Scotland) Regulations 2010 Welfare of animals act (Northern Ireland) 2011 The Welfare of Farmed Animals (Northern Ireland) 2012 The Mutilations (Permitted Procedures)(England) Regulations 2007; The Mutilations (Permitted Procedures)(Wales) Regulations 2007; The Prohibited Procedures on Protected Animals (Exemptions)(Scotland) Regulations 2007; The Welfare of Animals (Permitted Procedures by Lay persons) Regulations (Northern Ireland) 2012.	The Welfare of Animals (Transport)(England) Order 2006 The Welfare of Animals (Transport)(Wales) Order 2007 The Welfare of Animals (Transport)(Scotland) Regulations 2006 The Welfare of Animals (Transport) Regulations (Northern Ireland) 2006
IE	European Communities (Welfare of farmed animals) Regulations 2010 Protection of animals kept for farming purposes Act 1984	European Communities (Protection of Animals During Transport) Regulations 2006 Disease of Animals (Animal Transport)(Roll-on Roll-off vessels) order 2007

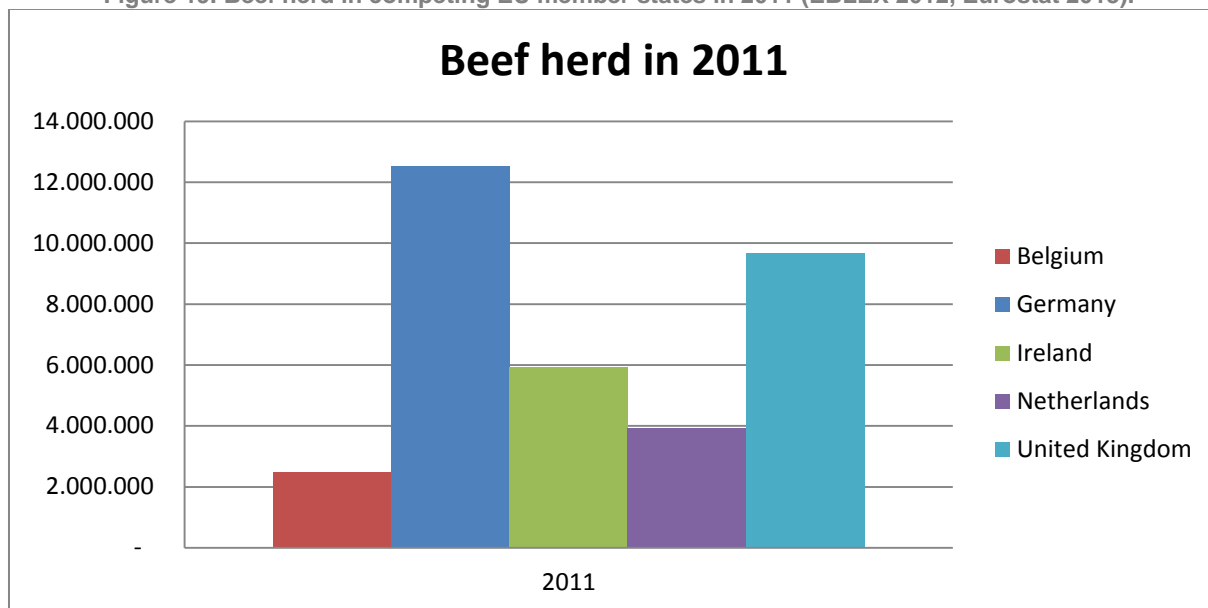
2.3.2 Market situation of the importing countries

The market situation is different in each importing country. To be able to answer sub question 1 (chapter 1.1) it is important to find out the characteristics of the beef sectors in these countries. These characteristics include herd numbers, production, carcass prices, and import and export information.

Germany has the largest cattle herd with a total of 12.527.800 bovine animals (2011) of which 15,6 percent are beef cattle (1.956.600 animals) (Eurostat 2013). The UK has a beef herd of 4.033.000 (40,6 percent of the total herd). Ireland has the largest percentage of beef cattle in its herd (54 percent) with a total of 3.510.000 animals (in 2011) (EBLEX 2012). Only a small percentage of the beef comes from dairy cows (21 percent) and veal calves (less than one percent) (Central Statistics Office 2012). Belgium has the smallest herd with a total of 679.400 beef animals (28 percent of the total herd) (Eurostat 2013)³⁶ (see also figure 19).

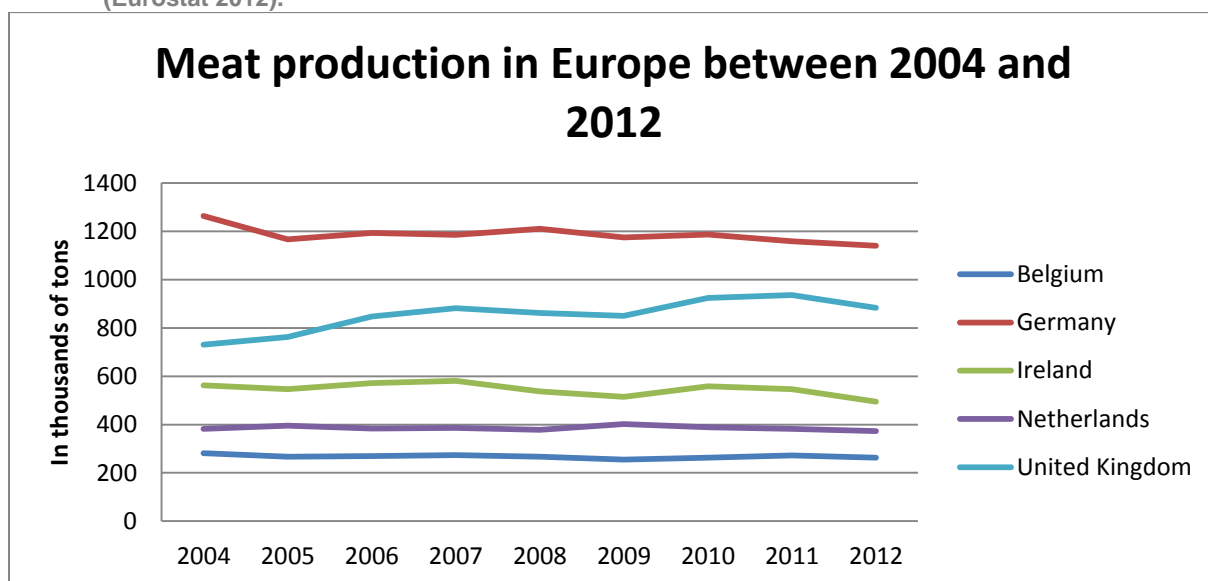
³⁶ All beef herd numbers include: male bovine animals (1 year), male bovine animals (2 years and over), heifers for slaughter (1 year), heifers for slaughter (2 years and over), and non dairy cows.

Figure 19. Beef herd in competing EU member states in 2011 (EBLEX 2012, Eurostat 2013).



Germany also has the largest production with 1.140.000 tons of beef in 2012. The United Kingdom produces 882.562 tons, Ireland produces 4.95.403 tons and Belgium produces 262.280 tons of beef (see also figure 20)³⁷.

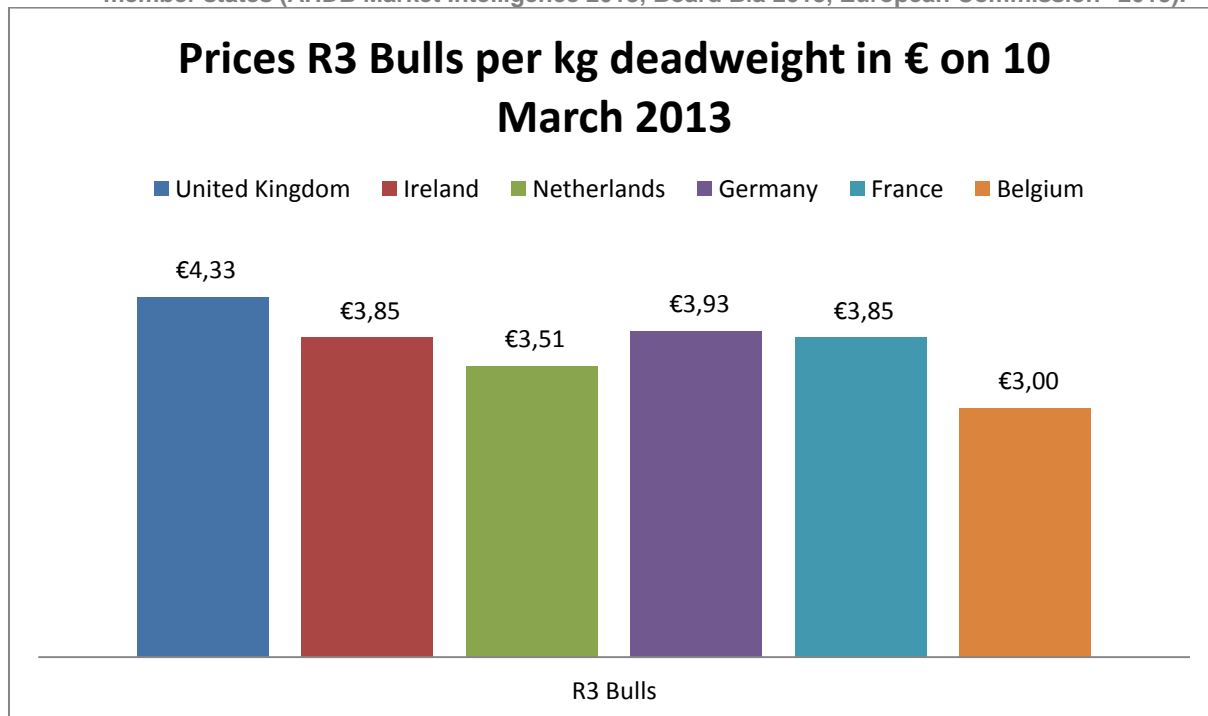
Figure 20. Beef production in competing European member states between 2000 and 2012 (Eurostat 2012).



The average price is determined by using bulls with an R3 quality classification as a reference. On 10 March 2013 the carcass price was highest in the United Kingdom with € 4,33 per kilogram. The lowest price was paid in Belgium with € 3,00 per kilogram (see also figure 21) (AHDB Market Intelligence 2013, Bord Bia 2013, European Commission^b 2013). Additional information on carcass prices in each import country is found in annex 4.

³⁷ Numbers include veal production and dairy cow production.

Figure 21. Reference prices for R3 bulls in Euro per kilogram between different competing EU member states (AHDB Market Intelligence 2013, Bord Bía 2013, European Commission^b 2013).³⁸



Ireland is the largest exporter exporting over 90 percent of their beef. Almost half of those exports go to the UK (254.000 tons). The remaining beef is exported within the EU (237.000 tons) the most important countries are France, Italy, the Netherlands, and Scandinavia (Bord Bía 2012). With the highest production Germany is the second largest exporter. The largest receivers are the Netherlands (23,8 percent), Italy (16,7 percent), and France (15 percent)(Vlam^a 2012). The UK and Belgium are the smallest exporters. The UK exports mainly to the Netherlands, Ireland, and France (Bord Bía 2012). Belgium meat goes to the Netherlands (29 percent), France (23 percent), and Germany (20 percent) (Belgium Meat Office 2012) (see also table 9).

	Import (in tons)	Export (in tons)
Germany	318.995	377.392
Belgium	57.544	124.002
The United Kingdom	235.358	143.647
Ireland	55.000	510.000
The Netherlands	347.000	229.000

Table 9. Imports and exports in tons per country (Vlam^a 2012, Vlam^b 2012 and Boad Bía 2012).

Germany and the United Kingdom are large importers. Germany receives the most beef from the Netherlands (30,3 percent), France (31,1 percent), and Denmark (8,6 percent). The United Kingdom receives the most from Ireland, the Netherlands, and Germany (see also table 9) (Vlam^a 2013, Bord Bía 2012).

³⁸ Carcass prices are an average of several databases and may therefore vary on the actual market and in different slaughter houses.

2.3.3 Case study: Animal welfare quality labels in importing countries

Each country has its own quality labels that identify animal welfare. The animal welfare requirements of the labels: *Red Tractor*, *Freedom Foods*, *Beef and Lamb Quality Assurance Scheme*, *Meritus*, *QS- Qualitätssicherung*, *Beter Leven ster 1*, and *Scharrelrundvlees* (see table 7) are analyzed and compared to answer sub question 4 (chapter 1.1). The requirements used for comparison are: mutilations and medical procedures, keeping systems and spaces, transport requirements, audits, and accreditation (see annex 5). This analysis will answer the question: *Which quality label has the best animal welfare practices?*

The internationally recognized British label *Red Tractor* assures food safety through every link of the food supply chain. This is achieved through traceability, limited pesticide residues, and increase consumer awareness of animal welfare practices. With 78.000 farmers and growers in the scheme it is the largest quality label in the UK. It is sold in supermarkets like Aldi, ASDA, Budgens, The Co-operative, Lidl, Morrisons, Tesco, and Waitrose³⁹. The animal welfare requirements are documented in 'Beef and Lamb Standards v2.0 (Red Tractor Assurance for Farms 2011). The following mutilations are permitted:



- *Castration*: The first week of life castration is permitted without anesthetics with a rubber ring or blood constricting device. Castration without anesthetics is allowed up to two months using any other method. After two months of age veterinary assistance and anesthetics are required;
- *Dehorning*: The first five months of age dehorning is allowed without the use of anesthetics. Dehorning of animals older than five months has to be done by a veterinarian using anesthetics;
- *Disbudding*: The first week of life disbudding using chemical cauterization is allowed without anesthetics. Disbudding up to two months of age using another method with anesthetics.

A fully slatted floor may not be used for breeding cows or replacement heifers. When slatted floors are used they must be non-slippery. The 'recommended'⁴⁰ space requirements for cattle in cubicle or loose housing are mentioned in table10.

Loose Housing	Weight	Solid floors		Slatted floors
		Bedded	total	
Suckler cows	400	3.5 m ²	4.90 m ²	2.5 m ²
	500	4.25 m ²	5.85 m ²	2.75 m ²
Growing and finishing cattle and youngstock	200	2.00 m ²	3.00 m ²	1.1 m ²
	300	2.75 m ²	3.95 m ²	1.5 m ²
	400	3.50 m ²	4.90 m ²	1.8 m ²
	500	4.25 m ²	5.85 m ²	2.1 m ²
	600	5.00 m ²	6.80 m ²	2.3 m ²

Table 10. Recommended space allowance in loose housing for the Red Tractor label.

Calves are not weaned from their mother and may be kept individually up to the age of eight weeks when visible contact with other calves is available. Calves older than eight weeks must be kept in groups of at least two calves.

³⁹ Information from the website of *Red Tractor*: <http://www.redtractor.org.uk/>

⁴⁰ The requirements are not obligatory for beef production under this label.

The British label *Freedom Foods* is the farm assurance and food labeling scheme from the RSPCA initiated in 1994. It is internationally recognized as a production system with high animal welfare standards. They are accredited through the United Kingdom Accreditation System (UKAS)⁴¹ and are organized through a registered charity that is independently audited. Members of the label are assessed every year and are subject to random unannounced monitoring visits from the RSPCA's Farm Livestock Officers⁴². The requirements are set up in the 'RSPCA welfare standards for beef cattle' (RSPCA 2010). The following mutilations are permitted:



- *Castration*: Between 24 hours and two months of age castration is allowed using a Burdizzo clamp (no specifications on anesthetics are mentioned);
- *Disbudding*: Up to five weeks of age disbudding is allowed using a hot iron and local anesthetics;
- *Dehorning*: Is not a routine procedure and may only be done by a veterinarian;
- *C-sections*: Routine use of C-sections is prohibited.

A foot care plan and veterinary health plan should be available on the farm.

Weight (kg)	Minimum Length Freedom Foods		Minimum length Red Tractor	
	Ration feeding	Ad lib. feeding	Ration feeding	Ad lib. feeding
100	35 cm	10 cm	-	-
200	40 cm	10 cm	45 cm	15 cm
300	50 cm	12.5 cm	50 cm	15 cm
400	60 cm	15 cm	55 cm	17 cm
500	70 cm	15 cm	55 cm	22 cm
600	75 cm	20 cm	60 cm	26 cm

Table 11. Feed space requirements for *Freedom Foods* and *Red Tractor* (RSPCA 2010, Red Tractor Assurance for Farms 2011).

Weight (kg)	Min. bedded lying area	Minimum non-bedded/ loafing area	Minimum total area per animal
< 100	1.5 m ²	1.8 m ²	3.3 m ²
101- 199	2.5 m ²	2.5 m ²	5.0 m ²
200- 299	3.5 m ²	2.5 m ²	6.0 m ²
300- 399	4.5 m ²	2.5 m ²	7.0 m ²
400- 499	5.5 m ²	2.5 m ²	8.0 m ²
500- 599	6.0 m ²	2.5 m ²	8.5 m ²
600- 699	6.5 m ²	2.5 m ²	9.0 m ²
700- 799	7.0 m ²	3.0 m ²	10.0 m ²
> 800	8.0 m ²	3.0 m ²	11.0 m ²

Table 12. Space requirements for *Freedom Foods* (RSPCA 2010).

Fully slatted housing and tethering system are prohibited. Breeding bull pens have to be 16 m² sleeping area with a total area of 25 m² (including service and exercise area). Calves may be kept individually until the age of eight weeks (visual contact with other calves required). Table 11 shows feed space requirements (these are the same for *Red Tractor*).

⁴¹ Accreditation certificate for Freedom Foods:

<http://www.ukas.org/CertificationBodies/schedules/PROD/0085Product%20Certification.pdf>

⁴² Information from the website of Freedom Foods: <http://www.freedomfood.co.uk/>

Freeze branding and tattooing are allowed identification methods. Calves younger than 7 days shall be transported and live calves shall not be exported.

The Irish *Beef and Lamb Quality Assurance Scheme* by the Livestock and Meat Commission (LMC) of Northern Ireland and the Beef Quality Assurance Scheme managed by Bord Bia (Irish Food Board) is the largest quality label in Ireland covering almost all beef producers. The requirements are documented in the 'Beef and Lamb Quality Assurance Scheme Producer Standard Revision 01 (Bord Bia 2010). The following mutilations are permitted:

- *Castration*: The first week of life castration using rubber rings may be done without anesthetics. After the first week until six months of age castration is done using the Burdizzo clamp under veterinary assistance and using appropriate anesthetics and pain relief drugs;
- *Disbudding*: The first two weeks of life disbudding using a heated disbudding iron may be done without anesthetics. After two weeks disbudding can only be done using local anesthetics.



Housing system	Live weight Range (kg)/ Animal type							
	200-300	301-400	401-500	501-600	601-700	700+	Dry suckler cow	Lactating suckler cow
Wholly bedded shed	2.0-2.9	3.0-3.4	3.5-3.9	4.0-4.4	4.5-4.9	5.0	4.0-5.0	5.0-6.0
Combination bedded and slatted floor	2.0-2.9	3.0-3.4	3.5-3.9	4.0-4.4	4.5-4.9	5.0	4.0-5.0	5.0-6.0
Part bedded/ outdoor feeding								
Indoor ling area	2.0	2.0-2.3	2.4-2.7	2.8-3.2	3.3-3.6	3.7	2.8-3.6	3.7-4.6
Outdoor feeding/ exercise area	1.0	1.0-1.1	1.1-1.2	1.2	1.3	1.4	1.3-1.4	1.3-1.4
Fully Slatted sheds	1.6-1.8	1.8-1.9	1.9-2.0	2.1-2.2	2.3-2.4	2.5+	2.6-3.0	3.0-3.2

Table 13. Recommended space requirements (m² per head) for growing/ adult cattle (Bord Bia 2010).⁴³

Calves are not weaned from their mother and may be kept individually up to the age of eight weeks when visible contact with other calves is available. The recommended space requirements for adult cattle are given in table 13.

This quality assurance scheme is accredited through the Irish National Accreditation Board (INAB)⁴⁴. Auditing is done every 18 months by Bord Bia or its nominated agents.

⁴³ The requirements are not obligatory for beef production under this label.

The Belgium quality label *Meritus* is managed by vzw Belbeef and accredited through BELAC⁴⁵. They have 3.178 participants of which 2.679 beef cattle farmers, 23 abattoirs, 32 wholesalers, and 444 sales points in Belgium (2012). It identifies quality meat. Several requirements concerning animal welfare are written down in 'Lastenboek "Meritus- Kwaliteitsrundvlees"' (vzw Belbeef asbl 2010). Mutilations are not permitted:

- *Castration*: Prohibited;
- *Disbudding/ dehorning*: Not specified.



Space requirements are mentioned in table 14. Tethering of animals is not allowed except for male bovine animals in quarantine or recovery or female animals in the follow up period, in quarantine or in recovery.

Weight	Fully bedded	Partially bedded	Tethering (and cubicle)
200	1.60 m ²	1.30 m ²	0.50 m ²
300	2.40 m ²	1.95 m ²	0.75 m ²
400	3.20 m ²	2.62 m ²	1.00 m ²
500	4.00 m ²	3.25 m ²	1.25 m ²
600	4.80 m ²	3.90 m ²	1.50 m ²
700	5.60 m ²	4.55 m ²	1.75 m ²
800	6.40 m ²	5.20 m ²	2.00 m ²

Table 14. Space requirements for Meritus (vzw Belbeef asbl 2010).

Dairy cows are prohibited under this label. For bulls the minimum slaughter age is six months and the maximum age is 26 months. For heifers and cows the minimum age is three months and the maximum age is 78 months. The inspection and certification of Meritus is done by vzw Codiplan. This organization was founded in 2006 by three different agricultural companies: *Boerenbond*, *Algemeen boerensyndicaat*, and *Fédération Wallone de l'Agriculture*. Audits are done with an interval of 18 months. Dutch companies that produce under this label audits are done yearly.

The German label QS Qualitätssicherung (QS) is the largest in Germany⁴⁶ and is set up for the identification of quality beef and veal production, calf raising, suckler cows and dairy cows (QS. Quality scheme for food^b 2013). The goal of QS is to assure the quality process along all stage of the supply chain. It is comparable with the Dutch 'IKB-rund' (QS. Quality scheme for food^a 2013) or Qrund. The label is owned by QS Qualität und sicherheit GmbH. The English translation of the requirements for this label is documented in 'Guideline Agriculture Cattle Farming'. Subjects include general system requirements, documentation, feed, animal health, organic fertilizers and nutrients, hygiene, animal welfare, monitoring program for the examination of data,



⁴⁴ Accreditation certificate for Board Bía Quality Assurance Board:

<http://www.inab.ie/directoryofaccreditedbodies/certificationbodiesproductcertification/6003-1.pdf>

⁴⁵ Accreditation certificate for Meritus: http://ng3.economie.fgov.be/Nl/belac/prodcert/scope_pdf/281-PROD.pdf

⁴⁶ Email reply from Ludwig Börger, Deutsche Bauernverband on 11 February 2013.

and livestock transport. These requirements are vague and not specified per animal category or keeping system. For comparison German legislation (see chapter 2.3.1 and annex 3) will be used.

Animals may be kept indoors or outdoors. The space requirements for calves are mentioned in table 15. Floors must be non-slippery and secure. Older cattle may not be kept on a slatted floor where the width exceeds 3.6 centimeters and the treat width must be 10 centimeters. All farmers need to apply for this label at one of the accredited organizations mentioned on the website of QS.⁴⁷

Weight Range	Minimum Area
Up to 150 kg	1.5 m ²
From 150 to 220 kg	1.7 m ²
Over 220 kg	1.8 m ²
Over 400 kg	2.2 m ²

Table 15. Space requirements for calves for QS Qualitätssicherung (QS. Quality scheme for food 2013).

Scharrelrundvlees is the best label when it comes to animal welfare. Second place goes to *Beter Leven ster 1* and third place goes to *Freedom Foods* (see annex 5)⁴⁸.

2.3.4 Summary important beef importers analysis (C)

The Dutch beef sector has superior animal welfare practices when legislation and quality labels are compared to each other. There are no specific regulations for the welfare of beef cattle. The only differences in each country are found in the permitted mutilations (see table 8 in chapter 2.3.1) where some do not require anesthesia for castration, disbudding or dehorning (sub question 2).

All importing countries have a large beef herd and more beef production than the Netherlands (except Belgium). The carcass prices in these countries are much higher than the Dutch average price (except Belgium). This beef is however sold 'cheaper' than Dutch produced beef. This could suggest that the cost in the entire chain might be higher in the Netherlands compared to the import countries, which will lead to increased consumer prices (sub question 1).

According to the analysis done in the case study (see also annex 5) several strengths from the Dutch labels and strengths from the import country labels can be formulated that will answer sub question 4.

Positive aspects of the Dutch quality labels:

- Dutch labels are the only labels that require a minimum suckling period where the calve has to stay with the mother or suckler cow;
- Castration is prohibited (*Scharrelrundvlees*);
- Dehorning is prohibited (*Scharrelrundvlees*);
- Dutch labels have extra requirements on transportation that exceed *Council Regulation (EC) 1/2005*. *Scharrelrundvlees* has a travel time limit of 4 hours and *Beter Leven ster 1* has a hard limit of 8 hours or 500 kilometers;
- Highest frequency of compliance audits of two times a year (*Scharrelrundvlees*);

⁴⁷ Approved coordinators on the website of QS: http://www.q-s.de/certification_bodies_approved.html

⁴⁸ The two most popular Dutch labels were used. *Beter Leven ster 2* would have scored higher than the labels mentioned.

- Grazing is required and specifically mentioned in the requirements;
- Anesthetics are always used for treatment.

Positive aspects of the labels from importing countries:

- Largest space requirements (*Freedom Foods*);
- All labels from importing countries are accredited and therefore guaranteed.

The Dutch labels *Scharrelrundvlees* and *Beter Leven ster 1* are different on four different categories. These differences are found in table 16 (sub question 3).

	<i>Scharrelrundvlees</i>	<i>Beter Leven ster 1</i>
Weaning of calves	Suckling for 20 weeks	Suckling for 3 months
Castration	Prohibited	Veterinary / Anesthetics/pain med.
Dehorning	Prohibited	First 5 weeks + anesthetics + pain med.
Transport	Limit of 4 hours	Limit of 8 hours or 500 km

Table 16. Differences in requirements of *Scharrelrundvlees* and *Beter Leven ster 1*.

A strong point that can be added to the strengths of the Dutch beef producing sector is:

- The sector has superior animal welfare practices that exceed the welfare practices of the most important importing countries.

2.4 SWOT analysis of the Dutch beef sector

The ABCD, PESTEL and Porter's Five Forces analyses have resulted in several strengths, weaknesses, opportunities, and threats (see chapter 2.2.3 and 2.3.4). To find out which strategies can be used for the marketing of Dutch produced beef and to find out on which tangible or intangible benefit the sector can differentiate itself (sub question 5, chapter 1.1) a SWOT analysis is done (table 17 and 18).

<p>Strengths</p> <ol style="list-style-type: none"> 1. Good image of the sector amongst consumers 2. Many different initiatives in relation to chain formations and quality labels for animal welfare. 3. Superior animal welfare practices that exceed the requirements in import countries. 	<p>Weaknesses</p> <ol style="list-style-type: none"> 1. The sector is for 43 percent depending on imports to meet the demands of the market. 2. Sector is diverse, small and spread out: Irregular qualities, and no uniform production 3. No quality label on animal welfare is accredited and can therefore not be guaranteed.
<p>Opportunities</p> <ol style="list-style-type: none"> 1. Animal welfare is important in today's society. 2. Consumers desire more transparency of the sector. 3. Supermarkets sell most beef and are dominant in the pricing and marketing of it. 	<p>Threats</p> <ol style="list-style-type: none"> 1. Dutch quality beef production is only a small percentage of the total herd. This number is decreasing. 2. Consumption patterns are changing and meat purchases per household are decreasing. 3. Price is the leading factors for purchasing beef.

Table 17. SWOT analysis.

The factors mentioned in table 17 are compared and analyzed in table 18 using the symbols: --, -, O, +, ++. The symbols ++ identify a very positive factor for the sector and the symbols – identify a very negative factor for the sector. The O symbol is used to identify no influence on the sector.

	Strengths			Weaknesses			
Opportunities		1	2	3	1	2	3
	1	+	+	++	-	0	-
	2	+	-	++	-	--	--
	3	+	0	+	-	--	0
Threats	1	0	-	-	-	-	0
	2	+	0	+	0	0	0
	3	-	--	--	--	0	+

Table 18. SWOT analysis combinations.

The sector has superior animal welfare practices that exceed legal requirements and the animal welfare practices of importing countries. Animal welfare is important in today's society and these superior practices can be positively used in a transparency strategy. However no quality label is accredited. This means that animal welfare practices cannot be officially guaranteed, making it difficult to be fully transparent. Transparency is also difficult because the sector is diverse, spread out, and small. This means there are many different keeping systems that cannot be controlled thoroughly.

A diverse sector that can only produce 57 percent of the beef demands makes it unattractive for supermarkets because of the uniform quality and large quantities that they demand. They often choose imported products which are produced under lower animal welfare standards. However the marketing influence of supermarkets makes it interesting for the sector to supply smaller supermarkets.

Still consumers find quality and price more important than animal welfare in their purchasing decisions. There can be many different labels and superior animal welfare practices but the choice will still go out to quality beef for a cheap price.

According to the SWOT analysis, five strategically questions or Main Attention Points (MAPs) are formulated. These are:

1. How can the sector use their superior animal welfare practices to respond to consumer demand to increase transparency?
2. How can the sector strengthen their position as a small, diverse and spread out sector to respond to the consumer demand to increase transparency?
3. How can the sector strengthen the credibility of labels that are not accredited to respond to the consumer demand to increase transparency?
4. How can the sector strengthen their small, diverse, and spread out sector to be able to use the marketing position of supermarkets?
5. How can the sector use their superior animal welfare practices to keep consumers from choosing price (and quality) over animal welfare?

These questions are answered in the symposium on 'Dutch produced beef' (chapter 3) and in chapter 4.

3. Symposium 'Dutch produced beef'

The symposium on 'Dutch produced beef' was organized on 3 April 2013 in Elst, Gelderland on the Blonde d'Aquitaine breeding farm of Ed Neerincx (Advisor of the department of LTO Beef Cattle and vice president of the Federation of beef cattle studbooks in the Netherlands). The goal of this symposium was to inform the sector (participants) (see annex 6) about the outcomes of this research. This included legislation on animal welfare, the market and quality labels in the Netherlands and in the most important importing countries. The strengths, weaknesses, opportunities, and threats were given after which the MAPs (Chapter 2.4) were presented for an open discussion on the future strategies for the sector. The opinions and suggested strategies (answers sub question 6 and 8, chapter 1.1) will be taking into account during the decision making process of LTO on the promotion of Dutch beef. The symposium ended with a company visit to the *Scharrelrundvlees* farm of Jos Bolk (member of the department of LTO Beef Cattle).

The participants of the symposium agreed that transparency should be increased. The beef sector has been closing off their companies from the outside world. This was done for many different reasons. But with the trend of animal welfare becoming more important and the consumer being more critical these 'walls' should be taken down and consumers should be allowed in.

"We want to profile ourselves that the Netherlands is doing it better on animal welfare, foodmiles, and other environmental aspects. We have no ambitions to supply [the large supermarket chains such as] Jumbo and Albert Heijn." – Leon Moonen

The following MAPs could be (partially) answered with the opinions from the discussion of the symposium. These are opinions of the participants that may, or may not be included in the marketing strategy for Dutch beef. The Department of LTO Beef Cattle will make the final decision.

How can the sector use their superior animal welfare practices to respond to consumer demand to increase transparency?

The sector should focus on all their positive aspects. They do not only have superior animal welfare practices but are also exceptional in sustainability. *BLK* would not be an option for the promotion of Dutch beef because it only includes the animal welfare aspects, plus it excludes a large part of the herd (double muscled breeds) because of the large amount of c- sections used. LTO Beef Cattle should stand for all quality beef breeds and focus on the positive aspects. This can be done through organizing open beef farm day for consumers where they can see what is done for the welfare of animals, also creating transparency. This should be organized with a national campaign.

How can the sector strengthen their position as a small, diverse, and spread out sector to respond to the consumer demand to increase transparency?

The strength of the sector lies not in the economies of scale but in special 'regional' products. This is what the sector should focus on in their open day.

How can the sector strengthen the credibility of labels that are not accredited to respond to the consumer demand to increase transparency?

The Irish 'Origin Green' from Board Bía is a label that 90 to 95 percent is producing under. The Dutch sector should set up a similar system what will guarantee the production of all Dutch beef and that will make it recognizable, not excluding any breed. This label should not only focus on animal welfare but also on sustainability.

How can the sector strengthen their small, diverse and spread out sector to be able to use the marketing position of supermarkets?

The consumer wants to know where his beef came from. The retail does not specifically want *BLk* but beef with a 'good story'. This can be used in the marketing and will add value to the beef. A regional product will be a good initiative.

Chapter 4 will complete the strategies and will complete the answers of all questions.

To conclude, increased transparency is the key aspect in marketing of Dutch produced beef. The sector wants to organize an open day marketed on a national scale to show the positive aspects of beef growing. They want to profile themselves on their best animal welfare practices, shortest foodmiles, and good environmental practices. Using the quality specifications of *BLk* is not an option because it excludes a large part of the sector. Born, raised, and slaughtered in the Netherlands, leading to 3xNL, is also not an option due to the lack of calves available for replacement and growing stock (sub question 6 and 8, chapter 1.1). There is a demand amongst smaller supermarkets for the marketing of Dutch beef. They are looking for beef with a 'good story' this does not necessarily mean *BLk* but this could be any guaranteed initiative. Dutch beef has the benefits of its superior animal welfare practices, decrease in food miles, and excellent environmental practices. This is what supermarkets are looking for. (sub question 7, chapter 1.1).

4. Marketing objectives and strategy

The marketing strategy will be described according to the 4 P's describing the strategies on Price, Place, Product, and Promotion. These are formulated according to segmentation or target group selection and to the goals of the Department of LTO Beef Cattle together with the answers of the MAPs of chapter 3.

Marketing objectives

The ambitions of the Department of LTO Beef Cattle, according to chairman Leon Moonen are based on two main objectives. These are:

The Department of LTO Beef Cattle believes that they can change the sale of beef in small supermarkets from imported beef to only Dutch beef which is sold as a regional product by 2018. These include all smaller supermarkets from Superunie (excl. Albert Heijn, Jumbo, Lidl, and Aldi).

The Department of LTO Beef Cattle believes that they can increase the margins of primary producers with 10 percent by 2018.

Segmentation and target group selection

The marketing of Dutch produced beef should focus on those who prepare the meals in each household in the Netherlands. These include women between the age of 21 and 80 who live together with a partner and/or children. This is the largest group. A smaller group may also include men between the age of 21 and 80 who live together with a partner and/or children who are responsible for the preparation of meals.

Marketing strategy

The marketing strategy for the Dutch beef sector is described in the 4P's (Product, Price, Place, Promotion).

Product

Beef that is at least fattened and slaughtered (indicating 2xNL) or that is born, fattened, and slaughtered (indicating 3xNL) in the Netherlands. Animals are of a quality beef breed. No dairy cows will be used. The product will be recognizable under a new label that will be developed by several partners of the Department of LTO Beef Cattle with requirements that will guarantee animal welfare practices and a sustainable production. This label will be officially accredited under the Dutch *Raad van Accreditatie* which will increase transparency for consumers (answer to MAP 1 and 3). Important in the marketing strategy is the end product. The piece of meat is a tangible product that consumers prepare for meals. In the product quality is not better than animal welfare, but "quality is animal welfare".

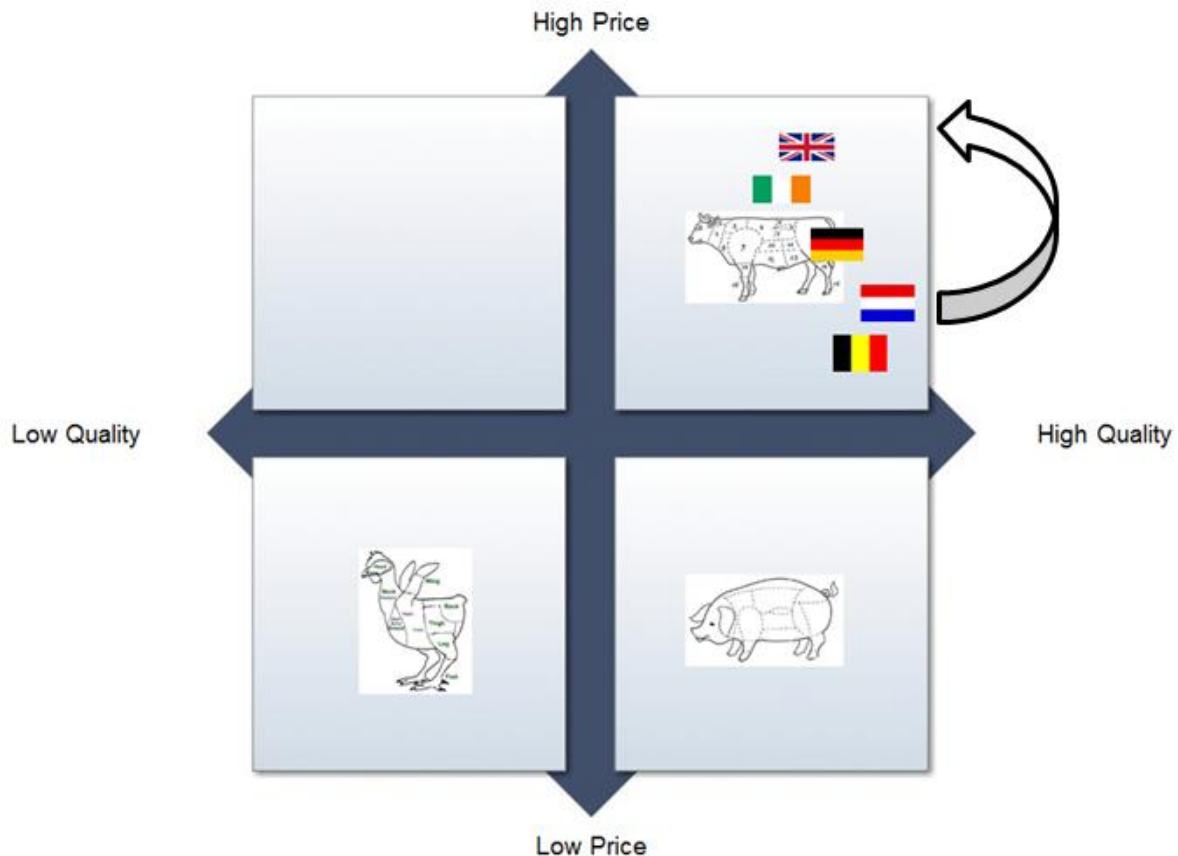
More "difficult" beef cuts need to be sold in the Netherlands. Consumers choose easy to prepare products that are usually cheaper. The more expensive cuts are exported to southern countries. This is partially because consumers are not well informed about the preparation of these cuts. When a demand can be created for these cuts, more can be sold in the Netherlands.

Price

Beef produced in the Netherlands that is marketed under the label mentioned in *Product* will be sold at a higher price than beef that is imported. It needs to have the image of a superior quality product. This is done to increase the price for primary producers. Figure 22

shows the positioning for primary producers and the price they receive for the quality they produce. The current situation where the Dutch producers produce a high quality for a lower prices compared to the importing countries. The arrow gives the desired positioning to be able to achieve the objectives mentioned above.

Figure 22. Positioning of Dutch beef producers and competitors (carcass price that is received).



Place

Beef produced in the Netherlands is sold under a “regional product” concept in the smaller supermarkets of the Superunie. For defining the region for the “regional product” the Netherlands will be divided up into 5 regions: north, east, west, middle, and south. In each of these regions the small supermarkets chains that popular in that region will be connected to a group of producers from that region (answer to MAP 4). These locations can be communicated to the consumer in the supermarket which will increase the transparency (answer to MAP 2). Creating a similar situation that Tesco is organizing in the UK⁴⁹ where local beef producers are contracted to supply a Tesco in their region.

The supermarkets that are included in this *Place* strategy are: Boni, Coop, Deen, Dekamarkt, Dirk van den Broek, Hoogvliet, Jan Linders, Poiesz, Plus, Spar, Emté, and Vomar.

⁴⁹Farmers Guardian (2012) *Tesco launches dedicated farmer contracts for beef and pork*. Available at: <http://www.farmersguardian.com/home/business/business-news/tesco-launches-dedicated-farmer-contracts-for-beef-and-pork/51120.article> [Accessed 3 Jun. 2013]

Promotion

The promotion of Dutch produced beef should focus on the end product, meaning the piece of beef. The following philosophy could be used:

“Minder maar Beter.” (Less but Better)

The trend shows that consumption patterns are changing to cheaper meat that is easier to prepare. Animal welfare and environmental practices are also increasingly important in the perception of consumers. Using the philosophy of eating less meat but better meat will help consumers choose animal welfare practices over price. This is also important because the sector is small and has a limited supply of beef. Most expensive parts are exported. When a demand for these parts can be created and overall less beef is sold could lead to more beef that stays within the Netherlands.

There is a lack of knowledge on how to prepare these beef products. therefore, in the promotion of beef, the focus should be laid on the target group on educating them how beef is prepared. To give people information, tips & tricks, and recipe's. Empathy should be created towards Dutch beef. It should be seen as a special and delicious product (answer to MAP 5). This can be done by:

- Using a famous chef to prepare and promote Dutch produced beef on a TV show or during workshops;
- Placing recipe's, information about Dutch beef, and tips in magazines popular amongst the target group. These include: Lifestyle magazines (such as Margriet, Vriendin, Flow, Flair, Plus Magazine, Viva, Linda, Hollands Glorie, etc.), TV guides (such as Avrobode, Veronica Magazine, Televisier, VARAgids, NCRV-gids, etc.), Cooking magazines (such as Delicious, Foodies, Jamie Magazine, Elle eten, etc.);
- Promotion in newspapers;
- Recipe's in supermarket magazines;
- Cooking workshops;
- Recipe's in the supermarkets next to the beef;
- Developing 'ready-to-eat' products from Dutch beef;
- Using social media for communicating tips, recipe's, information about beef cattle, etc.

These methods mentioned should have the main focus on the preparation of a piece of meat. As a secondary goal the keeping systems of animals can be mentioned and promoted. This can be done with references to:

- An open day organized in the sector;
- Excursions to beef farms;
- Biking and walking routes through nature reserve lands where cattle is grazing (maybe working together with ANWB);
- Dutch beef purchasing locations on a farm;
- For kids: 'Invite a farmer to your school' actions where kids can give a presentation about farms.

In conclusion, to reach the objectives of the Department of LTO Beef Cattle the marketing strategy should focus on a tangible beef product which is produced under a new identification label that is accredited and guarantees keeping systems to increase transparency.

“Quality is not better than animal welfare, Quality IS animal welfare.”

Dutch beef has to come across as a product of superior quality. Therefore prices are higher than imported products. It will be sold in all smaller supermarket chains as a regional product. The regional link to a farmer will increase transparency. With the marketing philosophy “Less but Better” the sector shows the acceptance of the trend that consumers eat less meat and at the same time it will stimulate the purchase of Dutch beef that is more expensive. Promotion should educate and inform consumers on the preparation of “Difficult” beef cuts. This can be done by focusing on media canals used by those who prepare meals: TV, magazines, and social media. A secondary reference should be made to open days on a farm, possible farm visits, bicycle routes, etc.

5. Plan of action: Communication plan

The marketing objectives of the Department of LTO Beef Cattle is to change the sale in small supermarkets from imported beef to only Dutch beef and to increase the margins of primary producers with 10 percent by 2018 (chapter 4). Before they can initiate a communication plan towards supermarkets and consumers several activities should be set up. These activities are described in the following paragraphs.

Activities in the sector

To be able to reach the goals mentioned in chapter 4 several actions have to be taken in the sector to be able to sell Dutch produced beef as a regional products in the supermarkets. These critical control points (CCP) are necessary for a successful initiation of the products:

1. Inventory of the exact production of quality beef producers in the Netherlands and the demand per small supermarket to analyze the possibilities for supplying this market.
2. Localize small supermarkets and beef producers that are willing to produce for this new quality system in each expected region to inventory how much of the production can be used for the demands of each supermarket in each region.
3. Set up the entire chain for the production of Dutch produced beef. Including slaughterhouses, beef packing businesses, wholesalers, etc.
4. Develop a quality system including requirements on animal welfare and sustainability. A label should be attached to make Dutch produced beef recognizable. This label should be accredited through the *Raad van Accreditatie*.

If one of these four CCP's is not favorable for the sector the short term goals should change in order to be able to reach the goal set by LTO in chapter 4. This could be done by, for example, selecting a few supermarket chains or by selecting one specific region.

Before the communication towards supermarkets and consumers can start the following should be guaranteed by the sector:

- There should be sufficient amounts of beef to be able to supply the smaller supermarket(s) that is/are selected;
- There should be sufficient product differentiation: more expensive parts should also be available for supermarkets;
- The beef that is produced should have a guaranteed quality and animal welfare practices. This is identified by an accredited beef quality label.

During this stage press releases can be written in collaboration with the department of Communication to interest the sector about new developments.

Communication towards supermarkets

The communication towards supermarkets should start by selecting a small group of supermarkets for the initiation process. Two CCP's are formulated:

1. Inventory which supermarkets are willing to have Dutch produced beef in their assortment. This should be a small selection of supermarkets
2. Supermarkets that are selected should be convinced of the superior qualities of Dutch produced beef.

If one of these CCP's has an unfavorable outcome for the sector the short term goals should be changed. A conclusion could be that supermarkets are not an interesting market. This means that the focus should go out to, for example, butchers, and/or catering.

Communication towards consumers

When the sector can guarantee the superior quality of Dutch beef, they have sufficient production, and they are fully transparent in their production process a broad range of communication and marketing activities towards consumers can be used. These activities are divided into primary and secondary activities.

Primary activities

- *Social media:* Social media is important in today's society. People spend an average of almost 10 hours per week on social media. Facebook (87,5 percent), Twitter (43 percent), and YouTube (30,5 percent) are the three most important social mediums (annex 2). To promote Dutch produced beef social media can be used to:
 - Share recipe's, tips and tricks on how to prepare beef, information on animal welfare, information in the sector, beef breed information, achievements, etc.
 - Invite consumers for: open days, workshops, cooking classes, etc.
 - Issue contests on: the best recipe, recognize the breed, or a 'Liking and Sharing' competition where e.g. the 500th person to like the Facebook page receives a goody bag/ beef/ etc.

TIP: It is important in social media to aim your messages at the target group. Actors in the beef sector often write messages directed at other actors in the chain. This is uninteresting for consumers.

- *Magazines:* The communication towards the target market described in chapter 4 can be done by working together with lifestyle magazines, TV guides, cooking magazines and News papers, and daily magazines (as mentioned in chapter 4). It can also be used in the magazines available at supermarkets. This can be used by preparing your own column or section about Dutch produced beef that is send to the editor's office of, for example, the Viva. This article should contain the following information:
 - A recipe: using a 'fast' to cook meat;
 - Information: How healthy is beef?
 - Information about beef and beef production in the Netherlands;
 - Tips on how to find a good quality piece of beef.

These types of articles should be prepared by the sector or in collaboration with the sector so that they can audit the information of the article.

TIP: Journalism students can write articles in combination with recipe's from students of the hotel and hospitality school.

- *Famous Chef:* A famous chef can be used to promote Dutch produced beef in its TV shows or workshops. Several labels could appear in the program as sponsors or the entire program can be about Dutch Produced beef. A good option for a TV chef would be Herman de Blijker.⁵⁰
- *Workshops/ Cooking classes:* Workshops and cooking classes should be organized in different restaurants, cooking clubs, and in collaboration with educational institutes. The focus should be on how to prepare different cuts of beef.

⁵⁰ See also: <http://culibookings.nl/>

- *Recipe's*: Recipe's for Dutch produced beef should be developed for the promotion in various magazines on social media, and for workshops and cooking classes. These recipe's can be developed in various ways:
 - Contest form where consumers are asked to write a recipe. They can win, for example a workshop from a famous chef, a beef package, etc.
 - Working together with MBO or HBO students of Hotel schools or cooking schools that can develop recipe's as part of a school assignment.

Secondary activities

- *Bicycle and walking routes*: Bicycle and walking routes are a popular form of transparency (see chapter 2.2.1) a good way to promote these is by working together with the ANWB and their magazine 'Kampioen'. This can be done through the following options:
 - Promoting nature reserve where cattle is grazing;
 - Organizing a bicycle route to recognize cattle breeds. Different pastures of different producers with a small description of the breed and what it is used for (also include dairy breeds);
- *Open days*: Open days should be organized as a secondary activity. Consumers should be made enthusiastic for Dutch beef before they visit a farm. Those who are interested should be able to visit a producer in their region within bicycle distance. This event should be organized when a 'special' activity is planned on the farm itself. For example, in spring when cattle is going outside to graze. Or in the fall when they go back inside.
- *On farm sales*: A popular transparency method mentioned in chapter 2.2.1 is buying products on a farm. Promote beef producers who sell their own products. Also use farmers markets for the promotion of Dutch produced beef.
- *Excursions for primary and secondary schools*: Another popular transparency method mentioned in chapter 2.2.1 is organizing excursions for primary and secondary schools. This promotes the sector but also educates children on beef cattle and their keeping systems. Small excursions have to be within bicycle distance.

TIP: Invite producers to primary schools where they educate children on farming and animals. This could be promoted in children magazines or on TV: 'Spreekbeurt houden over de boerderij, nodig een boer uit bij jou op school!' could be used.

To conclude, the sector should be well organized before promotion activities can start. During the initiation phase press releases can be written for agricultural magazines to interest the sector. It is important that supplies and quality are guaranteed before communication with supermarkets and consumers can start. For the communication towards consumers several options are possible. Social media, magazine articles and a famous chef are important primary activities. Secondary activities include on farm activities. These are bicycle and walking routes, open days, excursions, and on farm sales.

6. Conclusion

The Dutch beef producers are situated on a difficult market. The sector is small, spread out, and diverse. The number of companies and herd numbers are decreasing and the sector can only produce enough to supply 57 percent of the beef demands in the Netherlands. This means that the market is depending on imports from Germany, Belgium, the UK, and Ireland. Signals from the sector show that these imports do not meet the animal welfare requirements used in the Netherlands, but they are marketed as if they have superior welfare standards. This gives the Dutch a disadvantage in the marketing of their beef which could easily be used as an advantage for a marketing strategy. Reason enough for the Department of LTO Beef Cattle to find out what these differences are and more importantly: *How Dutch beef, produced under higher animal welfare standards, can be better marketed?*

Legislation on animal welfare is based on EU regulations and is therefore similar. The only differences found were those in national legislation on mutilations. Germany, the UK and Ireland allowed castration and disbudding without the use of anesthetics. The differences between Dutch beef and imported beef became clearer when the most important quality labels of each country were analyzed. With extra requirements on the minimum suckling period, transportation limits, grazing, and the highest frequency of compliance audits on top of other good animal welfare practices, the Netherlands scored best on animal welfare practices. The only positive factor for importing countries is that their quality labels are all nationally accredited. This is not the case for the Dutch labels which means that independent and unbiased auditing cannot be guaranteed. To increase the transparency of a quality label accreditation is a must. It will guarantee the entire system of keeping, and auditing.

Animal welfare is important in today's society and the Dutch use the highest animal welfare standards in the EU, an intangible benefit that can be used by the sector to differentiate itself. Still consumers choose quality, but more importantly, price over animal welfare. This is mainly due to changing consumption patterns. Consumers tend to choose cheaper products that are easier and faster to prepare. More families also choose for "meatless days". This is a result of the economical crisis but also a lack of knowledge.

Still, the sector has a good image under consumers. They do, however, wish a more transparent approach. This was also a conclusion of the symposium on 'Dutch produced beef'. According to the participants of the symposium this is best done through organizing a national open day to promote the positive aspects of the Dutch beef producers. However, consumers do not always wish to see the animal behind the product. The focus should be on the final consumer product.

The opportunity for the sector lies within the small supermarkets (Superunie). The sector does not produce enough beef to supply larger supermarkets such as Jumbo or Albert Heijn. Small supermarkets want to differentiate their product with a 'Good Story' that can be supplied by the Dutch beef producers. Beef with excellent animal welfare standards and superior sustainability practices that are guaranteed through an accredited quality label that identifies quality beef breeds produced under 2xNL or 3xNL. This product should be marketed regionally under the philosophy: *Minder maar Beter* (Less but Better). Consumers pay more for better quality beef and are educated on the preparation methods through information, recipe's and tips and tricks in magazines, on television or in the supermarkets. In these different media a reference should be made to 'transparent activities'. These activities include open days, bicycle or walking routes in pastures, farm sales or farmers markets.

7. Discussion

The findings of this research conclude that the Dutch beef sector is operating on a difficult market. The herd is shrinking and the number of beef producers is decreasing. On top of that the sector is spread out and diverse. Hobby farmers, small companies and a variety of breeds lead to small quantities and variable quality classifications. With the inauguration of the new chairman of the sector some changes have to be made. The sector wants to grow. To be able to do this the strength of each actor in the beef supply chain is needed. This marketing research has served as an eye-opener for many primary producers and retailers. It showed that the Dutch beef sector is doing better than its competitors when it comes to animal welfare practices, or even sustainability. It has inspired entrepreneurs in the entire sector to make a change.

The media has shown to be important in stimulating the sector to come up with solutions. The Twitter account @RundvleesNL, that was specially set up for this research, gained almost 100 followers and reactions on the messages were positive. The articles that were published in *Nieuwe Oogst* (annex 8) led to even more interest for the research in the sector. The post on Facebook by the editors of *nieuweoogst.nu* said the article was viewed over 500 times in the first day. This is above average compared to any other article. This proves that the sector wants to see an improvement for the marketing opportunities for Dutch produced beef. It lives in the entire sector and entrepreneurs in all links of the beef supply chain are looking for solutions.

This was also noticeable during the symposium on 'Dutch produced beef' in Elst. After the presentation about the results of the marketing research all participants were actively discussing the possible strategies for the future of the Dutch beef sector. The media was also involved for the recording of the symposium. A journalist from the *Leeuwarder Courant* wrote an article about animal welfare in the beef sector for consumers (annex 8). In collaboration with the department of Communication of LTO Nederland and LTO Noord a press release (annex 7) was also written about the symposium. This was picked up by *Boerderij*, *AgriHolland*, *FoodHolland*, *Vlees.nl*, *Vleesplus.nl*, and *Nieuwe Oogst*.

Based on the research and the symposium the Department of LTO Beef Cattle formulated two goals. They want to change the sale of beef in small supermarkets from imported beef to Dutch beef only by 2018 and they want to increase the margins for primary producers with 10 percent by 2018. These goals will be very difficult to meet. Chapter 2.2.1 showed that 31 percent of the entire herd is labeled as 'beef and pasture cattle' a large part of this is veal calf production. When looking at slaughtered adult animals the largest group is dairy cows. If the aim is to use only a quality beef breed in the marketing of Dutch produced beef in smaller supermarkets the question is: Is there enough beef for this market?

The improved marketing of Dutch produced beef is a something that lives in the entire sector. The results of this marketing analysis gave arguments that work positively on the image of Dutch produced beef. Still, research is necessary to fully implement a new quality label and sales channels. It is important to know how much quality beef is produced and what the demands are from the smaller supermarkets. There should be sufficient primary producers to supply these supermarkets in each region. To be able to set up this sales channel it is important to know the influences of wholesalers and meat traders in the sector for the full valuation of the carcass. This is important in the set up of the entire chain from primary producer, to slaughterhouse, and from slaughter house to the cutter, packer, wholesaler, and supermarket.

References

Articles

1. ABN AMRO (2012) *Supermarkten*. Available at: <https://www.abnamro.nl/nl/zakelijk/visie/sectoren/retail.html> [Accessed 20 Mar. 2013].
2. AHDB Market Intelligence (2013) *Deadweight cattle prices*. Available at: http://www.eblex.org.uk/markets/deadweight_cattle.aspx [Accessed 21 Mar. 2013].
3. Algemene Directie Statistiek en Economische Informatie (2011) *De Landbouw in België in Cijfers*. Available at: http://statbel.fgov.be/nl/binaries/keyagr_nl_tcm325-133838.pdf [Accessed 8 Jan. 2013].
4. Algemene Directie Statistiek en Economische Informatie (2012) *Kerncijfers landbouw, de landbouw in België in cijfers*. Available at: http://statbel.fgov.be/nl/binaries/NL_A5_WEB_Landbouw_2012_tcm325-192178.pdf [Accessed 8 Jan. 2013].
5. Bakker, E. de, H. Dagevos (2010) *Vleesminnaars, vleesminderaars en vleesmijders; Duurzame eiwitconsumptie in een carnivore eetcultuur*. LEI, Available at: <http://www.lei.dlo.nl/publicaties/PDF/2010/2010-003.pdf> [Accessed 22 Feb 2013].
6. Beekman, V., A. Pronk, A. de Smet (2010) *De consumptie van dierlijke producten*. Available at: <http://edepot.wur.nl/142716> [Accessed 26 Mar. 2013].
7. Belgian meat office (2012) *Belgisch vlees; Feiten & Cijfers 2012*. Available at: <http://www.belgianmeat.com/nl/publications/files/12289-NL-V3-factfigures2012.pdf> [Accessed 23 Jan. 2013].
8. Bord Bia (2010) *Beef and Lamb Quality Assurance Scheme Producer Standard Revision 1*. Available at: <http://www.bordbia.ie/industryservices/quality/Documents/Beef%20and%20Lamb%20Producer%20Standard.pdf> [Accessed 24 Jan. 2013].
9. Board Bia (2012) *Meat and Livestock, Review & Outlook 2011/12*. Available at: <http://www.bordbia.ie/industryservices/information/publications/MeatLivestockReview/Meat%20and%20Livestock%20-%20Review%202011-12.pdf> [Accessed 20 Nov. 2012].
10. Board Bia^a (2013) *Cattle Prices-Graphs*. Available at: <http://www.bordbia.ie/industryservices/information/cattle/pages/prices.aspx> [Accessed 7 Jan. 2013].
11. Board Bia^b (2013) *Eu & World Prices*. Available at: <http://www.bordbia.ie/industryservices/information/cattle/pages/euworldprices.aspx> [Accessed 21 Mar. 2013].
12. Bos, B., O. van Eijk, C. Goenee, C. de Lauwere (2008) *Het oordeel van consument en burger over de veehouderij*. Available at: <http://edepot.wur.nl/113814> [Accessed 8 Mar. 2013].
13. Bron, J.C. (2013) 'Geen blijvende schade imago vleesbranche'. Boerderij. Available at: <http://www.boerderij.nl/Home/Nieuws/2013/2/Geen-blijvende-schade-imago-vleesbranche-1172763W/>
14. Bureau Bartels b.v. (2011) *Evaluatie Subsidieregeling Jonge Landbouwers*. Amersfoort, 10 Januari 2011.
15. Centraal Bureau voor de Statistiek (2012)^a *Landbouw; gewassen, dieren, en grondgebruik naar regio*. Available at: <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=80780NED&D1=417,427,431-439,459,469&D2=0&D3=0,5,9-11&HDR=G1,G2&STB=T&CHARTTYPE=2&VW=T> [Accessed 14 Nov. 2012].
16. Centraal Bureau voor de Statistiek (2012)^c *Vleesproductie; aantal slachtingen en geslacht gewicht per diersoort*. Available at: <http://statline.cbs.nl/StatWeb/publication/default.aspx?DM=SLNL&PA=7123SLAC&D1=a&D2=1->

- [4&D3=142%2c207%2c246%2c259%2c272%2c285&HDR=G1&STB=T%2cG2&VW=T](#) [Accessed 19 Nov. 2012].
17. Centraal Bureau voor de Statistiek (2012)^d *Vleesproductie; aantal slachtingen en geslacht gewicht per diersoort*. Available at: <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=7123SLAC&D1=a&D2=1-4&D3=273-280,286-293&HDR=G2&STB=T,G1&VW=T> [Accessed 19 Nov. 2012].
 18. Centraal Bureau voor de Statistiek (2012)^e *Smakelijk weten; Trends in voeding en gezondheid*. Available at: <http://www.cbs.nl/NR/rdonlyres/C025D01D-13B9-448F-AAB0-9B7EAB5F5B8E/0/2012a331pub.pdf> [Accessed 20 Mar. 2013].
 19. Centraal Bureau voor de Statistiek (2013)^a *Consumentenprijzen; prijsindex 2006 = 100*. Available at: <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=71311NED&D1=0&D2=10-31,34-35,37-38&D3=64,129,194,219-233&HDR=T,G2&STB=G1&P=T&VW=T> [Accessed 22 Feb. 2013].
 20. Centraal Bureau voor de Statistiek (2013)^b *Landbouw; Gewassen, dieren, en grondgebruik naar regio*. Available at: <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=80780NED&D1=417,419-420,427,429-441,459,469,471,481-483&D2=0&D3=0,5,9-12&HDR=G1,G2&STB=T&CHARTTYPE=2&VW=T> [Accessed 7 Mar. 2013].
 21. Central Statistics Office (2012) *ADM01: Livestock Slaughtering by Type of Animal, Month and Statistic*. Available at: <http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/saveselections.asp> [Accessed 20 Nov. 2012].
 22. Centraal Bureau voor de Statistiek (2013)^c *Internationale handel; in- en uitvoer volgens SITC-indeling*. Available at: <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=7137SHIH&D1=0-1&D2=4-5&D3=3,13,21,24-25,28,33,48-49,56,62,64-65&D4=168,181,194,207,I&HDR=T,G2,G3&STB=G1&VW=T> [Accessed 9 Apr. 2013].
 23. College van Deskundigen MDVA (2013) *Criteria en beoordelingsrichtlijnen Maatlat Duurzame Veehouderij en Aquacultuur; MDVA 4.1 – MDV7 versie 1*. Available at: <http://www.smk.nl/files/categories/11/1149/Actuele%20criteria%20Vleesvee%20MDV A4-1%20MDV%207%20versie%201.pdf> [Accessed 20 Feb. 2013].
 24. Copa-Cogeca (2012) *Statistiques relatives au secteur de la viande bovine*. Available at: http://circa.europa.eu/Public/irc/agri/ovins/library?l=/public_domain/bovins_statistiques&vm=detailed&sb=Title [Accessed 24 Jan. 2013].
 25. Defra & National Statistics (2012) *Farming Statistics, Final Crop Areas, Yields, Livestock Populations, and Agricultural Workforce at 1 June 2012, United Kingdom*. Available at: <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-landuselivestock-farmingstats-june-statsrelease-june12finaluk-121220.pdf> [Accessed 7 Jan. 2013].
 26. Defra (2008) *ARCHIVE: Animal Welfare Act 2006*. Available at: <http://archive.defra.gov.uk/foodfarm/farmanimal/welfare/act/las.htm> [Accessed 21 Jan. 2013].
 27. Dierenbescherming¹ (2011) *Dierenwelzijnswaarden voor runderen gehouden voor het vlees met 1 ster*. Available at: <http://beterleven.dierenbescherming.nl/fileupload/criteria/FD%20Criteria%20rund%20vleesvee%201%20ster%2020120103.pdf> [Accessed 15 Jan. 2013].
 28. Dierenbescherming² (2011) *Dierenwelzijnswaarden voor runderen gehouden voor het vlees met 2 ster*. Available at: <http://beterleven.dierenbescherming.nl/fileupload/criteria/FD%20Criteria%20rund%20vleesvee%202%20ster%2020120103.pdf> [Accessed 15 Jan. 2013].

29. Distrifood, T. Hallema (2012) *Spar: alleen Nederland rundvlees*. Available at: <http://www.distrifood.nl/Formules/Algemeen/2012/6/Spar-alleen-Nederlands-rundvlees-DIS143162W/> [Accessed 26 Feb. 2013].
30. Distrifood (2012) *Marktaandeelen; Marktaandeelen 2007- 2011 Nielsen*. Available at: <http://www.distrifood.nl/Service/Marktaandeelen/> [Accessed 20 Mar. 2013].
31. DTZ Zadelhoff (2012) *De zekerheid van supermarkten; onderzoek naar de kenmerken van supermarktbeleggingen*. Available at: http://www.dtz.nl/media/90180/supermarkten_retail_folder_internet.pdf [Accessed 22 Feb. 2013].
32. EBLEX (2012) *UK Yearbook 2012 – Cattle*. Available at: http://www.eblex.org.uk/documents/content/markets/m_uk_yearbook12_cattle240812.pdf [Accessed 7 Jan. 2013].
33. EBLEX & AHDB (2012) *Country Report; FRANCE-Cattle*. Available at: http://www.eblex.org.uk/documents/content/markets/m_cr_beef_france191212.pdf [Accessed 8 Jan. 2013].
34. EBLEX (2013) *Deadweight Cattle Prices*. Available at: http://www.eblex.org.uk/markets/deadweight_cattle.aspx [Accessed 8 Jan. 2013].
35. Eurobarometer 270 (2007) *Attitudes of EU citizens towards animal welfare*. Available at: http://ec.europa.eu/public_opinion/archives/ebs/ebs_270_en.pdf [Accessed 13 Jan. 2013].
36. European Commission^a (2013) *Beef & Veal Market Situation*. Available at: <http://www.pve.nl/pve?waxtrapp=kugGsHsuOnbPTEcBNNC&context=kfMsHsuOnbPTEW> [Accessed 21 Mar. 2013].
37. European Commission^b (2013) *Markt informatiegegevens Runderen, Referentieprijs Stieren en Koeien*. Available at: http://www.pve.nl/pve?waxtrapp=lralS_HsuOnbPTEcBND&context=kfMsHsuOnbPTEW [Accessed 8 Mar. 2013].
38. Eurostat (2012) *Production of meat: cattle*. Available at: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tag00044&plugin=1> [Accessed 7 Jan. 2013].
39. Eurostat (2013) *Cattle population (annual data)*. Available at: <http://appsso.eurostat.ec.europa.eu/nui/show.do> [Accessed 8 Jan. 2013].
40. FOD Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu (2013) *Vervoer van dieren; Dierenwelzijn tijdens het transport*. Available at: <http://www.health.belgium.be/eportal/AnimalsandPlants/animalwelfare/transport/index.htm?fodnlang=nl> [Accessed 13 Mar. 2013].
41. Food for Food (2012) *Driekwart Nederlanders heft geen interesse in vleesvervangers*. Available at: <http://www.foodforfood.info/foodmonitor/artikel/driekwart-nederlanders-niet-geinteresseerd-in-vleesvervangers> [Accessed 22 Feb. 2013].
42. Galen, M.A. van (2011) *Innovatie in de agrosector*. LEI. Available at: <http://edepot.wur.nl/175351> [accessed 21 Feb. 2013].
43. Galen, M.A. van (2012) *Innovatie en vernieuwingen in de land- en tuinbouw in 2010 gedaald*. Available at: <http://www.lei.dlo.nl/nl/content/agri-monitor/pdf/Innovatie%20en%20vernieuwing%20in%20de%20land-%20en%20tuinbouw%20in%202010%20gedaald%20april%202012.pdf> [Accessed 21 Feb. 2013].
44. GfK (2009) *Vleesimago; Samenvattende rapportage*. Available at: http://www.pve.nl/wdocs/dbedrijfsnet/up1/ZecjaozHQ_imago_vlees_2008.pdf [Accessed 22 Feb. 2013].
45. GfK (2010) *Productschap voor Vee, Vlees en Eieren; Rapportage Q3 2010*. Available at: http://www.pve.nl/wdocs/dbedrijfsnet/up1/ZoyztkjIU_hh_aankopen_roodvlees_NL_3e_kw_2010.pdf [Accessed 10 Jan. 2013].

46. GfK (2011) *Kwartaal 4 2011 (cijfers)*. Available at: http://www.pve.nl/wdocs/dbedrijfsnet/up1/ZwulnqplqnB_4e_kwartaal_2011.pdf [Accessed 8 Jan. 2013].
47. GfK (2012) *Productschap voor Vee, Vlees en Eieren; Rapportage Q3 2012*. Available at: http://www.pve.nl/wdocs/dbedrijfsnet/up1/ZqijmstlM_PVE_Q3_2012_vlees.pdf [Accessed 8 Jan. 2013].
48. HBD (2012) *Slagerijen*. Available at: <http://www.hbd.nl/pages/1424/Branches/Slagerijen.html> [Accessed 20 Mar. 2013].
49. HBO (2008) *Factsheet- Studentenaantallen in het hogere beroepsonderwijs*. Available at: http://www.vereniginghogescholen.nl/vereniging-hogescholen/publicaties/cat_view/43-publicaties/40-2008 [Accessed 29 May 2013].
50. Horst, K. van der. *Sterke stijging aantal runderslachtingen 2009. Boerderij*, 28 Jan. 2010. Available at: <http://www.boerderij.nl/Home/Achtergrond/2010/1/Sterke-stijging-aantal-runderslachtingen-2009-AGD141436W/> [Accessed 19 Nov. 2012].
51. Landbouw en Visserij (2012) *Marktprijzen runderkarkassen*. Available at: <http://lv.vlaanderen.be/nlapps/docs/default.asp?id=2886> [Accessed 23 Jan. 2012].
52. Meuwissen, P., H. de Haan, A. Beijers (2010) *Herkenbaar NL premium rundvlees; Haalbaarheidsonderzoek*. Available at: http://www.hereford.nl/upload/alinea_844.pdf [Accessed 29 Jan. 2013].
53. Ministerie van Economische Zaken, Landbouw en Innovatie (2012) *Monitor Duurzaam Voedsel 2011*. Available at: <http://www.rijksoverheid.nl/bestanden/documenten-en-publicaties/rapporten/2012/06/06/monitor-duurzaam-voedsel-2011/monitor-duurzaam-voedsel-2011.pdf> [Accessed 10 Jan. 2013].
54. Ministerie van Economische Zaken, Landbouw en Innovatie (2012) *Nota Dierenwelzijn en Diergezondheid; Een maatschappelijk geaccepteerde omgang met dieren*. Available at: <http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2012/02/23/kamerbrief-bij-de-nota-dierenwelzijn-en-diergezondheid.html> [Accessed 21 Feb. 2013].
55. Napel, J. ten, R. Hoving-Bolink, D. Bohte-Wilhelmus, P. Hannewijk (2012) *Naar een probleemloos afkalvende dikbilkoe*. Available at: <http://edepot.wur.nl/249672> [Accessed 9 Apr. 2013].
56. Plas, C. van der^a (2013) *'Veesector moet zelf lespakket maken.'* Nieuwe Oogst, editie Noord, Volume 9, number 8, 23 February 2013.
57. Plas, C. van der^b (2013) *Nederland heeft woud aan organisaties voor dierenwelzijn*. Nieuwe Oogst, editie Noord, Volume 9, number 8, 23 February 2013.
58. PROduCERT (2001) *Norm; PROduCERT gecertificeerd scharrelrundvlees*. Available at: http://www.producert.nl/index.php?id=20_1&rn=31 [Accessed 15 Jan. 2013].
59. PVE & NVWA (2013) *Vleesproductie; aantal slachtingen en geslacht gewicht per diersoort*. Available at: <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=7123SLAC&D1=a&D2=0-7&D3=12,77,142,207,220,233,246,259,272,284-286,296-298&HDR=G1&STB=T,G2&VW=T> [Accessed 20 mar. 2013].
60. PVV (2013) *Slachtingen; Runderen (in stuks)*. Available at: <http://www.pve.nl/pve?waxtrapp=bufisHsuOnbPTEcBNA&context=kfMsHsuOnbPTEW> [Accessed 8 Mar. 2013].
61. PVV & PVE (2012) *Livestock, Meat and Eggs in the Netherlands, keyfacts 2011*. Available at: http://www.pve.nl/wdocs/dbedrijfsnet/up1/ZwulnqplaqD_428908PVEpromoENGdef-bw.pdf [Accessed 16 Nov. 2012].
62. QS. Quality Scheme for food^a (2013) *Guideline General Regulations*. Available at: http://www.q-s.de/dc_general_regulations.html [Accessed 5 Mar. 2013].
63. QS. Quality Scheme for food^b (2013) *Guideline Agriculture Cattle Farming*. Available at: http://www.q-s.de/dc_agriculture_cattle_production.html [Accessed 5 Mar. 2013].

64. Raad voor Dieraangelegenheden (2012) *Winstgevend Welzijn; Over het creëren van kansen*. Available at: http://www.rda.nl/home/files/winstgevend_welzijn_rda_2012_01.pdf [Accessed 21 Feb. 2013].
65. Rabobank (2013) *Rabobank Cijfers en Trends; Branche-informatie Slagerijen*. Available at: <https://www.rabobankcijfersentrends.nl/index.cfm?action=print.printPdf&id=dda5fd95-15ae-4105-8a4e-6b9c55a76ee0> [Accessed 20 Mar. 2013].
66. Red Tractor Assurance for Farms (2011) *Beef and Lamb Standards v2.0*. Available at: http://www.assuredfood.co.uk/resources/000/617/999/Beef_Lamb_standard.pdf [Accessed 1 Feb. 2013].
67. RSPCA (2010) *RSPCA welfare standards for beef cattle*. Available at: <http://www.rspca.org.uk/ImageLocator/LocateAsset?asset=document&assetId=1232712365259&mode=prd> [Accessed 1 Feb. 2013].
68. Stichting Keurmerk Waterland (2013) *Waterlandnormen voor rund-, moerkalf- en lamsvlees*. Available at: http://www.natuurvlees.nl/user_files/WATERLANDNORMEN.pdf [Accessed 29 Jan. 2013].
69. Vlam¹ (2010) *Import van vlees (2001-2010)*. Available at: <http://www.vlam.be/marketinformationdocument/files/Importvanvlees2001-2010.pdf> [Accessed 23 Jan. 2013].
70. Vlam²(2010) *Export van vlees (2001-2010)*. Available at: <http://www.vlam.be/marketinformationdocument/files/Exportvanvlees2001-2010.pdf> [Accessed 23 Jan. 2013].
71. Vlam¹ (2012) *Duitsland vlees 2012*. Available at: <http://www.vlam.be/marketinformationdocument/files/Vlees-Duitsland2012.pdf> [Accessed 23 Jan. 2013].
72. Vlam² (2012) *Frankrijk vlees 2012*. Available at: <http://www.vlam.be/marketinformationdocument/files/Vlees-Frankrijk2012.pdf> [Accessed 23 Jan 2013].
73. Vlees.nl (2012) “*Vegetarische kip of gehaktbal schaadt imago van vlees*”. Available at: <http://www.vlees.nl/algemeen/nieuws/bericht/vegetarische-slager-misleidt-en-verwart-2/> [Accessed 22 Feb. 2013].
74. Vzm BELBEEF asbl (2010) *Lastenboek “MERITUS-Kwaliteitsrundvlees” per 1 januari 2010*. Available at: http://www.belbeef.be/docs/Lastenboek_Meritus_NL.pdf [Accessed 1 Feb. 2013].
75. Vzm BELBEEF asbl (2010) *Intern Reglement “MERITUS- Kwaliteitsrundvlees” per 1 januari 2010*. Available at: http://www.belbeef.be/docs/Intern_reglement%20Meritus_NL.pdf [Accessed 1 Feb. 2013].
76. Wakker dier (2012) *Bijna exponentiële groei omzet kip met Beter Leven ster*. Available at: <http://www.wakkerdier.nl/wakker-dier-persberichten/bijna-exponentiele-groei-omzet-kip-met-beter-leven-ster> [Accessed 22 Feb. 2013].
77. Wijk- Jansen, E. van, K. Hoogendam, M. de Winter (2011) *Vee in zicht; Boeren en burgers over transparantie in de veehouderij*. LEI-rapport 2011-021. Available at: <http://edepot.wur.nl/173495> [Accessed 8 Mar. 2013].

Legislation

78. Council Directive 98/58/EC of 20 July 1998 Concerning the protection of animals kept for farming purposes. (OJ L 221, 8.8.1998, p. 23-27) Last amended by Council Regulation (EC) no. 806/2003 of 14 April 2003 (OJ L 122, 16.5.2003, p. 1-35). Consolidated version: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1998L0058:20030605:EN:PDF>

79. Council Decision 78/923/EEC of 19 June 1978 concerning the conclusion of the European Convention for the Protection of animals kept for farming purposes. (OJ L 323, 17.11.1978, p. 12-22).
80. Council Regulation (EC) no 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EED and 93/199/EC and Regulation (EC) no. 1255/97 (OJ L 3, 5.1.2005, p. 1-44).
81. Council Directive 91/628/EEC of 19 November 1991 on the protection of animals during transport and amending Directives 90/425/EEC and 91/496 EEC (OJ L 340, 11.12.1991, p. 17). Last amended by Council Regulation (EC) 806/2003 of 14 April 2003 (OJ L 122, 16.5.2003, p. 1-35). Consolidated version: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1991L0628:20030605:EN:PDF>
82. Council Regulation (EC) No 1255/97 of 25 June 1997 concerning Community criteria for control posts and amending the route plan referred to in the Annex to Directive 91/628/EEC (OJ L 174, 2.7.1997, p. 1-9). Last amended by Council Regulation (EC) No 1/2005 of 22 December 2004 (OJ L 3, 5.1.2005, p. 1-44). Consolidated version: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1997R1255:20070105:EN:PDF>
83. Council Regulation (EC) 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules. (OJ L 165, 30.4.2004, p.1-77) Last amended by Commission Regulation (EU) 208/2011 of 2 March 2011 (OJ L 58, 3.3.2011, p. 29-35). Consolidated version: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2004R0882:20120101:EN:PDF>
84. Gezondheids- en welzijnswet voor dieren, 24 september 1992 (BWBR0005662) Last amended by Kamerstukken 31389, 19 May 2011 (Bekendmaking Stb. 2011, 345). Consolidated version: http://wetten.overheid.nl/BWBR0005662/geldigheidsdatum_29-11-2012
85. Regeling toegelaten handelingen, 1 augustus 1992 (BWBR0005265) Last amended by Regeling van de Minister van Economische Zaken, 12 December 2012 nr. WJZ/12375453 (Bekendmaking Stcrt. 2012, 26878). Consolidated version: http://wetten.overheid.nl/BWBR0005265/geldigheidsdatum_29-03-2013
86. Ingrepenbesluit, 25 januari 1996 (BWBR0007864) Last amended by Besluit van 1 Juni 2010 (Bekendmaking Stb. 2010,240) Consolidated version: http://wetten.overheid.nl/BWBR0007864/geldigheidsdatum_29-03-2013
87. Regeling dierenvervoer 2007, 8 december 2006, nr. TRCJZ/2006/3773 (BWBR0020684) Last amended by Kamerstukken 273997 van 1 oktober 2012 (Bekendmaking Stcrt. 2012,11473). Consolidated version: http://wetten.overheid.nl/BWBR0020684/geldigheidsdatum_30-11-2012
88. Regeling controleposten, 24 juni 1999, nr. TRCJZ/1999/5560 (BWBR0010527) Last amended by nr. TRCJZ/2006/3773, 5 januari 2007 (bekendmaking Stcrt. 2006, 245). Consolidated version: http://wetten.overheid.nl/BWBR0010527/geldigheidsdatum_30-11-2012
89. Tierschutzgesetzes, 24.07.1972. (BGBl. I S. 1206,1313) Last amended by article 20 of the law of 9 December 2010 (BGBl. I S. 1934). Online available at: <http://www.gesetze-im-internet.de/tierschg/BJNR012770972.html>

90. Verordnung zum Schutz landwirtschaftlicher Nutztiere und anderer zur Erzeugung tierischer Produkte gehaltener Tiere bei ihrer Haltung (Tierschutz-Nutztierhaltungsverordnung- TierSchNutztV), 25.10.2001. (BGBl. I S. 2043) Last amended by regulation of 1 October 2009 (BGBl. I S. 3223). Online available at: <http://www.gesetze-im-internet.de/tierschnutztv/BJNR275800001.html#BJNR275800001BJNG000101377>
91. Verordnung zum Schutz von Tieren beim Transport und zur Durchführung der Verordnung (EG) Nr. 1/2005 des Rates (Tierschutztransportverordnung – TierSchTrV) 11.02.2009 (BGBl. I S. 375) Online available at: http://www.gesetze-im-internet.de/tierschtrv_2009/BJNR037500009.html
92. Animal Welfare Act 2006, 8 November 2006 (2006 c. 45). Online available at: <http://www.legislation.gov.uk/all?title=animal%20welfare%20act%202006>
93. The Welfare of Farmed Animals (England) Regulations 2007, 19 July 2007 (2007 No. 2078). Online available at: http://www.legislation.gov.uk/uksi/2007/2078/pdfs/uksi_20072078_en.pdf Last Amended by The Welfare of Farmed Animals (England)(Amended) Regulations 2010, 22 December 2010 (2010 No. 3033). Online available at: http://www.legislation.gov.uk/uksi/2010/3033/pdfs/uksi_20103033_en.pdf
94. The Welfare of Farmed Animals (Wales) Regulations 2007, 23 October 2007 (2007 No. 3070 (W. 264)). Online available at: http://www.legislation.gov.uk/wsi/2007/3070/pdfs/wsi_20073070_mi.pdf Last amended by The Welfare of Farmed Animals (Wales) (Amendment) Regulations 2010, 9 November 2010 (2010 No. 2713 (W. 229)). Online available at: http://www.legislation.gov.uk/wsi/2010/2713/pdfs/wsi_20102713_mi.pdf
95. The Welfare of Farmed Animals (Scotland) Regulations 2010, 4 November 2010 (2010 No. 388). Online available at: http://www.legislation.gov.uk/ssi/2010/388/pdfs/ssi_20100388_en.pdf
96. Welfare of Animals Act (Northern Ireland) 2011, 29 March 2011 (2011 c. 16). Online available at: http://www.legislation.gov.uk/nia/2011/16/pdfs/nia_20110016_en.pdf
97. Welfare of Farmed Animals Regulations (Northern Ireland) 2012, 30 March 2012 (2012 No. 156). Online available at: http://www.legislation.gov.uk/nisr/2012/156/pdfs/nisr_20120156_en.pdf
98. The Mutilations (Permitted Procedures)(England) Regulations 2007, 30 March 2007 (2007 NO. 1100). Online available at: http://www.legislation.gov.uk/uksi/2007/1100/pdfs/uksi_20071100_en.pdf
99. The Mutilations (Permitted Procedures)(Wales) Regulations 2007, 27 March 2007 (2007 No. 1029 (W. 96)). Online available at: http://www.legislation.gov.uk/wsi/2007/1029/pdfs/wsi_20071029_mi.pdf
100. The Prohibited Procedures on Protected Animals (Exemptions)(Scotland) Regulations 2007, 20 March 2007 (2007 No. 256) Online available at: http://www.legislation.gov.uk/ssi/2007/256/pdfs/ssi_20070256_en.pdf Amended by The Prohibited Procedures on Protected Animals (Exemptions)(Scotland) Amendment Regulations 2009, 9 February 2009 (2009 No. 47) Online available at: http://www.legislation.gov.uk/ssi/2009/47/pdfs/ssi_20090047_en.pdf
101. The Welfare of Animals (Permitted Procedures by Lay Persons) Regulations (Northern Ireland) 2012, 30 March 2012 (2012 No. 153). Online available at: http://www.legislation.gov.uk/nisr/2012/153/pdfs/nisr_20120153_en.pdf

102. The Welfare of Animals (Transport) England Order of 5 December 2006 (2006 No 3260). Online available at:
http://www.legislation.gov.uk/uksi/2006/3260/pdfs/uksi_20063260_en.pdf .
103. The Welfare of Animals (Transport) (Scotland) Regulations 2006 of 15 December 2006 (2006 No. 606). Online available at:
http://www.legislation.gov.uk/ssi/2006/606/pdfs/ssi_20060606_en.pdf Amended by The Welfare of Animals (Transport) (Scotland) Amendment Regulations 2009 (2009 No. 339). Online available at:
http://www.legislation.gov.uk/ssi/2009/339/pdfs/ssi_20090339_en.pdf .
104. The Welfare of Animals (Transport) Regulations (Northern Ireland) 2006 of 21 December 2006 (2006 No. 538). Online available at:
http://www.legislation.gov.uk/nisr/2006/538/pdfs/nisr_20060538_en.pdf Amended by The Welfare of Animals (Transport) (Amendment) Regulations (Northern Ireland) 2007 (2007 No. 32). Online available at:
http://www.legislation.gov.uk/nisr/2007/32/pdfs/nisr_20070032_en.pdf
105. The Welfare of Animals (Transport) (Wales) Order 2007 of 27 March 2007 (2007 No. 1047 (W. 105)). Online available at:
http://www.legislation.gov.uk/wsi/2007/1047/pdfs/wsi_20071047_mi.pdf
106. S.I. No. 311/2010 – European Communities (Welfare of farmed animals) Regulations 2010, 30 June 2010. Online available at:
<http://www.irishstatutebook.ie/2010/en/si/0311.html> .Amended by S.I. No. 98/2012 – European Communities (Welfare of farmed animals)(Amendment) Regulations 2012, 22 March 2012. Online Available at:
<http://www.irishstatutebook.ie/pdf/2012/en.si.2012.0098.pdf>
107. Protection of animals kept for farming purposes Act 1984 (No. 13 of 1984), 4 July 1984. Online available at:
<http://www.irishstatutebook.ie/1984/en/act/pub/0013/print.html>
108. S.I No. 267/2006 – European Communities (Protection of Animals During Transport) Regulations 2006. Online Available at:
<http://www.irishstatutebook.ie/2006/en/si/0267.html>
109. S.I. No. 580/2007 – Diseases of Animals (Animal Transport) (Roll-on Roll-off Vessels) Order 2007, of 17 August 2007. Online available at:
<http://www.irishstatutebook.ie/pdf/2007/en.si.2007.0580.pdf>
110. Wet betreffende de bescherming en het welzijn der dieren. 14.08.1986 (B.S. 31.01.1987). Online available at: http://www.favv.be/sp/pa-sa/doc/leg-vet/1986-08-14_DV_WET.pdf
111. Koninklijk besluit inzake de bescherming van voor landbouwdoeleinden gehouden dieren. 01.03.2000 (B.S. 06.05.2000). Online available at:
http://www.favv.be/sp/pa-sa/doc/leg-vet/2000-03-01_DV_KB.pdf
112. Koninklijk besluit betreffende de toegestane ingrepen bij gewervelde dieren, met het oog op het nutsgebruik van de dieren of op de beperking van de voortplanting van de diersoort. 17.05.2001 (B.S. 04.07.2001). Online available at:
http://www.favv.be/sp/pa-sa/doc/leg-vet/2001-05-17_DV_KB.pdf
113. Tierschutzgesetz. 24.07.1972 (BGBl. I S. 1206, 1313) on 18 May 2006. Last amended by Art. 20 G v. 9.12.2010/ 1934.

Meetings and Interviews

Date	Location	Agenda points	Organization
5 Nov. 2012	Weert	Excursion Essex farm, Limousin Regionaal farms with several butchers. With LTO Vleesveehouderij presedent: Leon Moonen.	Limousin Regionaal
8 Nov. 2012	Arnhem	Project Natuurlijke Luxe; Antibiotica, leptospirose; Mestbeleid, zoogbex; GLB; Brandveiligheid; Project VleesveeNet; Opdracht beschrijven promotie Nederlands Rundvlees.	Vakgroep LTO Vleesveehouderij
13 Nov. 2012	Donkerbroek	Natuurlijke luxe; Antibiotica, leptospirose; Mestbeleid, zoogbex; GLB; Brandveiligheid; Project VleesveeNet; Opdrachtbeschrijving promotie Nederlands Runvlees	LTO Vleesveehouderij Ledenvergadering
26 Nov. 2012	Brussels, Belgium	Situation, forecast, management of beefmeat market; Future of CAP; State of play on the bilateral negotiations Canada; Electronic identification and voluntary labelling of beefmeat; market access barriers in the Republic of Korea, Japan, USA; Schmallenberg virus; lactic acid use for the decontamination of carcasses.	Copa- Cogeca Working Part on Beef and Veal National offices
27 Nov. 2012	Brussels, Belgium	Situation, forecast and beef market; future of the CAP and Negotiations on the CAP Budget; Electronic identification of cattle and voluntary labeling of beef; Barriers to access international markets Korea, Japan and USA.	DG agriculture and Rural Development, Copa- Cogeca, ECVC, CEJA, CELCAA, FoodDrinkEurope, EFFAT, BEE
6 Dec. 2012	Weert	Meeting between Limousin Regionaal and links throughout the chain as a possible producer for Supermarket SPAR. With visiting of connected farms, Slaughter house Tomassen Vlees BV.	Superunie, Spar, Limousin Regionaal
17 Jan. 2013	Helmond	General meeting of LTO Vleesveehouderij. With a company visit at beef producer 'Jan Franken'. Vervolg Project Natuurlijke Luxe, Geboorte Gemak; Antibiotica, leptospirose; Mestbeleid, zoogbex; GLB; Brandveiligheid; Project VleesveeNet; Promotie Nederlands Rundvlees; Markt; Social Media; maatlat duurzame veehouderij	Vakgroep LTO Vleesveehouderij
22 Jan. 2013	Heeze	Meeting with important members in the beef industry on the set up of a quality label "Natuurvlees", grazing	Beroepsvereniging natuurboeren, Limousin

		nature pastures from “Staatsbosbeheer”, Higher Education set up for this and the input of all organizations that attended the meeting.	Regionaal, Natuurvlees Nederland, LTO Nederland, Vleesvee Federatie
22 Jan. 2013	Roermond	Visit of Limousin Regionaal producer and dry-aged trial from limousin regionaal cattle, produced at Daan Cunen Vlees. Meeting as a promotional tool for potential Customers.	Limousin Regionaal, van der Ven Verswaren, Daan Cunen Vlees, Butchers
25 Jan. 2013	Maastricht	Presentation in research to benchmark the label Limousin Regionaal.	Hogere Hotel School, Limousin Regionaal
12 Feb. 2013	Ijselstein	Meeting with Heijdra meat production. initiators of Keten Duurzaam Rundvlees. Also a specialist for <i>Voedingscentrum</i> as present.	Leon, Moonen, Anita Heijdra, Edwin Heijdra, Corné van Dooren
6 Mar. 2013	Nijkerk	Meeting and interview with Boni supermarkets on their strategies on beef.	Gerrit van Zalk
11 Mar. 2013	Wageningen	General meeting of LTO Vleesveehouderij.	Vakgroep LTO Vleesveehouderij
13 Mar. 2013	Arnhem	Meeting with the Federation of beef stud books the Netherlands. Included all chairman’s per stud book. Presentation on the future of beef (by me due to absence of Leon Moonen).	Federatie Vleesvee stamboeken Nederland.
18 Mar. 2013	Brussels, Belgium	Meeting with the <i>Belgische Boerenbond</i> . Meeting with Esther de Lange at European Parliament, Meeting with Albert Jan Maat, Politiek Café with players in agriculture who are active in Brussels, Chiel Hermans spoke about his vision on beef producing	Vakgroep LTO Vleesveehouderij, Belgische Boerenbond, Albert Jan Maat, Esther de Lange, Chiel Hermans, Luc Groot
3 Apr. 2013	Elst	Symposium Dutch beef. Presentation about the outcome of the market research and an active discussion between participants of the symposium about the positioning of the sector and the strategies for the promotion of Dutch produced beef	See Annex 3.

Date	Type of contact	Contact person	Function
18 Mar. 2013	Email	Marjan Laning	Poiesz, secretary of the Meat purchasing agent.
14 Mar. 2013	Email	Customer Service	Dirk, Bas & Digros
14 Mar. 2013	Email	Customer Service	Poiesz
4 Mar. 2013	Telephone	Customer service	Albert Heijn
4 Mar. 2013	Telephone	Customer service	Aldi
4 Mar. 2013	Telephone	Customer service	Lidl
4 Mar. 2013	Telephone	Customer service	Dirk, Bas & Digros
4 Mar. 2013	Telephone	Customer service	Spar
4 Mar. 2013	Telephone	Customer service	Emté
4 Mar. 2013	Telephone	Customer service	Poeisz
26 Feb. 2013	Email	Janny Hazendonk	DekaMarkt, Customer service
26 Feb. 2013	Email	Giuseppina Laseur-Dolce	C1000, Customer service
21 Feb. 2013	Email	Susanne van de Garde	PLUS, Consumer service
21 Feb. 2013	Email	G. van Zalk	Boni
20 Feb. 2013	Email	Stefanie van Eijk	Hoogvliet, Customer service
20 Feb. 2013	Telephone	Margaret McCarthy	Bord Bía
19 Feb. 2013	Telephone	Customer service	Albert Heijn
19 Feb. 2013	Telephone	Customer Service	Aldi
19 Feb. 2013	Telephone	Stefan Bult	Coop
18 Feb. 2013	Telephone	Corry Meijer	Jumbo
18 Feb. 2013	Telephone	Customer service	Plus
18 Feb. 2013	Telephone	Customer Service	Lidl
18 Feb. 2013	Telephone	Customer service	Hoogvliet
18 Feb. 2013	Telephone	Guus Hopen	C1000
18 Feb. 2013	Telephone	Customer Service	Dirk, Bas & Digros
18 Feb. 2013	Telephone	Customer Service	Spar
18 Feb. 2013	Telephone	Customer Service	Emté
18 Feb. 2013	Telephone	Customer Service	DekaMarkt
18 Feb. 2013	Telephone	Customer Service	Poiesz
18 Feb. 2013	Telephone	Customer Service	Boni
18 Feb. 2013	Email	Margaret McCarthy	Bord Bía, the Netherlands office
29 Jan. 2013	Telephone	Henk Broeders	Bief Select
14 Jan. 2013	Email	Henk Broeders	Bief Select

Annex 1. Contents of regulations on animal welfare in the EU and the Netherlands

Improved welfare practices for animals in primary production is a high political and social priority in the Netherlands. Society demands a level of welfare that is higher than the legal requirements based on European and Dutch national Legislations (Raad van Dieraangelegenheden 2012).

In the European Union (EU) the groundwork for animal welfare is laid down in two basic regulations stating the general requirements for all animals kept for farming purposes. These regulations are:

- *Council Directive 98/58/EC*
- *Council Decision 78/923/EEC*

The *Decision 78/923/EEC* adopted the outcome of the European Convention for the protection of animals kept for farming purposes held in Strasbourg in 1976. These outcomes are translated into the annex of *Directive 98/58/EC* and form the ground work for all legislation concerning animal welfare in all member states. The annex lays down requirements concerning staffing, inspection, record keeping, freedom of movement, buildings and accommodations, animals not kept in buildings, automatic or mechanical equipment, feed, water and other substances, mutilations and breeding procedures that must be ensured within the EU. These are the following requirements:

- Animals shall be cared for by a sufficient number of staff with the appropriate ability, knowledge and professional competence;
- All animals kept in a husbandry system must be inspected at least once a day;
- Adequate lighting shall be available to allow inspection;
- Any animal which appears to be ill or injured must be cared for immediately using the appropriate manner of treatment;
- The owner or keeper of animals shall maintain a record of any medical treatment given;
- The records shall be kept for at least three years;
- Animals have freedom of movement, this must not be restricted in a way that causes unnecessary suffering or injury;
- Materials used for the construction of accommodation may not be harmful to the animals and must be thoroughly cleaned and disinfected;
- Air circulation, dust levels, temperature, relative air humidity and gas concentrations must be kept within limits which are not harmful to the animals;
- Animals kept in buildings must not be kept in permanent darkness or without an appropriate period of rest from artificial lighting;
- Animals not kept in buildings shall be given protection from adverse weather conditions, predators and risks to health;
- Automatic or mechanical equipment essential for the health and wellbeing of animals must be inspected at least once a day;
- Animals must be fed a wholesome diet which is appropriate to their age and species. No animal shall be provided with food that may cause unnecessary suffering or injury;
- All animals must have access to feed at intervals appropriate to their physiological needs;
- All animals must have access to a suitable water supply;
- Feeding and watering equipment must be designed so that contamination of food and water is kept to a minimum;

- No substance, except for those given for therapeutic or prophylactic purposes or for the purpose of zootechnical treatment as defined in Article 1(2)© of Directive 96/22/EEC⁵¹ must be administered;
- National provisions with regards to mutilations shall apply according to these general rules;
- Natural or artificial breeding (procedures) which may cause suffering or injury to any of the animals concerned must not be practiced;
- No animal shall be kept for farming purposes unless it is reasonably expected that it can be kept without detrimental effect on its health or welfare.

In the *Decision 78/923/EEC* it clearly states that: "...the protection of animals is not in itself one of the objectives of the Community." It further explains that the main reason for adapting animal welfare requirements is to ensure equal conditions and competition within the EU, plus to ensure the functioning of the common market. This is also the purpose of *Directive 98/58/EC*.

The importance of animal welfare with regards to regulations increased with the Treaty on European Union (1992) where it states that "[European Commission Institutions should] pay full regard to the welfare requirements of animals...when drafting and implementing Community legislation...⁵²" This is even more strengthened by the Treaty of Amsterdam of 1997 where the voluntary option of paying regards to animal welfare is repealed by: "...the Community and Member States shall pay full regard to the welfare requirements of animals...when formulating and implementing...policies...⁵³"

Another issue mentioned in the European Convention for the Protection of Animals Kept for Farming purposes is that: "...it shall apply to the keeping, caring and housing of animals and in particular animals in modern intensive stockfarming systems." Not including other farming systems.

Regulations concerning the animal welfare requirements during the transportation of farming animals are determined on a European level and are obligatory for all member states. It is used to reduce the distance of transport of live animals and to effectively ensure the protection of animals during transportation. The regulations concerning the welfare of animals during transportation are the following:

- *Council Regulation (EC) 1/2005*
- *Council Regulation (EC) 1255/97*
- *Council Directive 91/628/EEC*

All requirements mentioned in *Council Regulation (EC) 1/2005* are based on the requirements mentioned in *Council Directive 91/628/EEC*. The regulation of 2005 made the directive of 1991 mandatory for all member states.

Animals must be fit for travel. This means that they should not travel when they are unable to move independently without pain, present a severe open wound or prolapse and new born mammals in which the navel has not completely healed. Calves less than ten days of age may only be transported less than 100 kilometers. Animals may be transported when they are sick or ill under veterinary supervision. Sedatives are not allowed during these transports (annex I, chapter I).

⁵¹ Council Directive 92/22/EC of 29 April 1996 concerning the prohibition on the use in stockfarming of certain substances having a hormonal or thyrostatic action and of beta agonists (OJ L 125, 23.05.1996, p. 3).

⁵² Declaration on the protection of animals (1992) (OJ L 191, 29.7.1992, p. 103).

⁵³ Protocol on the protection and welfare of animals (1997) (OJ C 340, 10 November 1997).

All means of transport should avoid injury and suffering and should ensure the safety of animals. It should protect animals from inclement weather, extreme temperatures and adverse changes in climatic conditions. It should be cleaned and disinfected after every use, the means of transport should prevent animals from escaping or falling out and the air quality and quantity should be appropriate. There should be access to the animals for inspection and care taking. Floors should be anti-slip and should minimize the leakage of urine or faeces. There should be sufficient lighting for inspection during transport (annex I, chapter II).

It is prohibited to strike or kick an animal or to apply pressure to any particular sensitive part of the body that may cause pain or suffering. It is also not allowed to suspend animals by mechanical means or lift or drag the animals by the head, ears, horns, legs, tail or fleece. It is forbidden to use prods or other implements with pointed ends. The use of electric shocks should be avoided and tethering of animals may only be done when necessary (annex I, chapter III).

The space requirements for transportation of bovine animals are laid down in annex I, chapter VII . Table 19 gives the transport space requirements for bovine animals when they are transported by rail or by road.

Category	Approximate Weight (in kg)	Area in m ² per animal
Small calves	55	0.30 to 0.40
Medium-sized calves	110	0.40 to 0.70
Heavy calves	200	0.70 to 0.95
Medium-sized cattle	325	0.95 to 1.30
Heavy cattle	550	1.30 to 1.60
Very heavy cattle	>700	[>1.60]

Table 19. Transport space requirements of bovine animals during transport by rail or by road.

Table 20 gives the space requirements for transport of bovine animals during transport by air. These space requirements are smaller of those mentioned in Table 19 for transportation by rail or road.

Category	Approximate Weight (in kg)	Area in m ² per animal
Calves	50	0.23
	70	0.28
Cattle	300	0.84
	500	1.27

Table 20. Transport space requirements of bovine animals during transport by air.

Table 21 states the space requirements for bovine animals that are transported by sea. These square meters per animal are relatively the largest space requirements of all transportation means.

Live weight in kg	M ² /animal
200/300	0.81/1.0575
300/400	1.0575/1.305
400/500	1.305/1.5525
500/600	1.5525/1.8
600/700	1.8/2.025

Table 21. Transport space requirements of bovine animals during transport by sea.

In addition to the space requirements it is also mentioned in chapter VII of annex I that pregnant animals must be allowed 10 percent extra space during transport. Pregnant females for whom 90 percent or more of the gestation period has already passed or females who have given birth in the previous week may not be transported at all (annex I, chapter I).

Chapter VII of annex I of *Council Regulation (EC) 1/2005* states that animals cannot be transported longer than eight hours except when the transport vehicle meets certain additional requirements. These requirements are based on:

- Sufficient bedding available for all animals on the floor of the vehicle;
- Appropriate feed available for the journey time and free access to water;
- There must be direct access to the animals;
- Adequate ventilation for the animals must be possible;
- There must be moveable panels available to create separate compartments;
- There must be a connection to a water supply source available during stops;
- The roofing shall be of a light color and properly insulated.

Additional travel time is given when these requirements of the vehicle are met. The additional travel time goes up to 14 hours after which the animals must be given an hour rest period for feeding and watering after which an additional 14 hours of travel time is permitted. After this time period all cattle must be unloaded either at place of destination or at official control posts assigned by the EU. These control posts are regulated on a European level through *Council Regulation (EC) 1255/97* and must ensure animal welfare and animal health during the stay before the extended travel time. A control post needs to comply with several requirements. In art. 3 of the regulation it states that a control post needs to be:

- Under control of an official veterinarian;
- Operate according to the Community rules on animal health and animal welfare
- Have inspections twice a year.

The annex of *Council Regulation (EC) 1255/97* gives a listing of specific requirements concerning the specific welfare of animals.

A factor influencing the travel time is that commercial truck drivers are allowed to drive nine hours a day with an extension of a total of ten hours for two days a week. Interval breaks of 45 minutes after every four and a half hours of driving are obligatory as stated in the Regulation (EC) 561/2006 on harmonization of certain social legislation in relation to road transport.⁵⁴

As a result of the bovine spongiform encephalopathy (BSE) crises it was necessary to improve the transparency of the conditions of the production of beef products. Therefore a legislative framework was designed by the EU to clarify identification and traceability of beef and beef products. These regulations are obligatory for all member states and consist of the following:

- *Council Regulation (EC) 1760/2000*
- *Commission Regulation (EC) 911/2004*

⁵⁴ Council Regulation (EC) 561/2006 on harmonization of certain social legislation in relation to road transport. (OJ L 102, 11.4.2006, p.1-13).

In *Council Regulation (EC) 1760/2000* it is mentioned that each member state must establish a system for the identification and registration of bovine animals (art. 1) which is based on ear tags in both ears of an animal identifying animals individually, a computerized database, animal passports (which are issued within 14 days after the notification of birth) and an individual register kept on each holding (art. 3).

The regulation also identifies a compulsory community beef labeling system in section I in which it states that a label of beef should contain:

- A reference number or reference code ensuring the link between the meat and the animal;
- An approval number of the slaughterhouse and the Member State country where the slaughterhouse is located. The indication will be: 'Slaughtered in (name of Member State) (Approval number)';
- An approval number of the cutting facilities and the Member State where the cutting facilities are located. The indications will be: 'Cutting in (name of Member State) (Approval number)'.

As of the first of January 2002 the operators and organizations will also indicate the following information on beef labels:

- Member State of birth;
- Member State(s) where fattening took place;
- Member State where slaughter took place;
- In case of beef which is derived from animals born, raised and slaughtered in the same member state the indication will be: 'Origin (name Member State)'.

Any voluntary label should be authorized by the Member State and should have, on one hand, a direct link between the identification of the carcass, quarter or pieces of meat or, on the other hand, the individual animal. It may not provide misleading or insufficient information (art. 16). For the implementation of *Council Regulation (EC) 1760/2000* the *Commission Regulation (EC) 911/2004* sets specific requirements regarding eartags, passports and holding registers of bovine animals.

A regulation that lays down requirements for official controls to verify compliance with rules aiming to prevent, eliminate or reduce to acceptable levels or risk to humans and animals, and to guarantee fair practices in feed and food trade protecting consumer interest and including feed and food labeling is the following:

- *Council Regulation (EC) 882/2004*

Member States must carry out official controls on animal health and animal welfare based on identified risks, records and any other information that might indicate non compliance. Such controls need to be carried out by competent authorities assigned by each individual member state. These authorities must ensure:

- Effective and appropriate controls on live animals;
- Are free from any conflict or interest;
- Have access to adequate laboratory capacity and appropriate facilities and equipment;
- Have legal powers to carry out official controls
- Have a contingency plan in case of an emergency

This is done with staff trained on all aspects of the food chain, including animal welfare (annex II).

In the Netherlands these European regulations are translated to national laws. The regulations that form the base for the protection of animal welfare are the following regulations:

- *Wet Dieren*
- *Gezondheids- en welzijnswet voor dieren*
- *Besluit welzijn productie dieren*
- *Ingrepenbesluit*
- *Regeling toegelaten handelingen*

The *Wet Dieren* came into force on the first of January 2013 and is a framework with a limited number of rules set. This framework allows different council orders and ministerial regulations for the functioning of further legislation on animal welfare and other animal related matters. It applies to labeling, cutting, packing, marking, sorting and transporting meat as well as the promotion of the quality of animal products. Also included is the resisting, control and prevention of the spread of pathogens that are harmful to animals (art. 1.2 lid 2). The intrinsic value of an animal is acknowledged in this law and is taken into consideration when forming new legislation (art. 1.3 lid 1,2). It is forbidden to cause pain or harm to an animal. This includes that it is prohibited to let an animal perform labor that exceeds its power, transport or market a cow with a full udder and use animal force or a not permitted force tool to help with the labor of a cow (art. 2.1 lid 1).

The *Wet Dieren* sets further regulations on veterinarians and the manner and conditions under which operations may be performed, identification of animals which may be treated, the characteristics and trade of equipment used for veterinary surgeries and a registration system for the use of veterinary medicines and operations on animals (art. 2.8 lid 3). Veterinarians have to be registered in a database (art. 4.3) to be able to perform operations on animals. To be eligible for admittance to this register of veterinarians veterinarians should meet the set qualifications, education requirements and follow continuous education. There is a certain validity period for the registration and the admittance to the register can be revoked when necessary (art. 4.1). Furthermore veterinarians have a 'duty of care' which makes it obligatory to give aid to all animals who need it (art. 4.2).

The regulation *Gezondheids- en welzijns wet voor dieren* is now incorporated into the *Wet Dieren*. However the legislation mentioned in this law is still valid. In the *Gezondheids- en welzijns wet voor dieren* it states in chapter III the care and welfare of animals (art. 35). It mentions that vertical legislation can be set up for specific animal species and the manner of keeping them. These additional vertical legislation may include:

- Fixation or tethering of animals;
- Separation of animals of different age groups, gender or breed;
- Space that animals should have.

These national vertical laws exist for pigs⁵⁵, broilers⁵⁶, calves⁵⁷ and Laying hens⁵⁸.

In art. 40 it states the prohibition of physical measures taken in which part(s) of the body are removed or damaged with the exception of the following measures:

⁵⁵ Varkensbesluit of 7 July 1994: http://wetten.overheid.nl/BWBR0006806/geldigheidsdatum_29-11-2012

⁵⁶ Vleeskuikenbelsuit 2010 of 1 June 2010: http://wetten.overheid.nl/BWBR0027822/geldigheidsdatum_29-11-2012

⁵⁷ Kalverenbesluit of 7 July 1994: http://wetten.overheid.nl/BWBR0006805/geldigheidsdatum_29-11-2012

⁵⁸ Legkippenbesluit of 27 May 2003: http://wetten.overheid.nl/BWBR0015138/geldigheidsdatum_29-11-2012

- Procedures to infertile bovine animals;
- Procedures that are of veterinary necessity;
- Procedures mentioned in *Ingrepenbesluit* of the national law.

The *Ingrepenbesluit* is the national law on allowed mutilations and procedures on bovine animals. It allows for the insertion of a hypodermic needle, dehorning, and when it can increase the safety of humans and animals, applying a smooth stainless steel nose ring for bulls (art. 2 lid 1). It also allows for the following identification procedures in which physical damaging occurs. A maximum of two of these measures can be used:

- Applying ear tags in one ear;
- Applying a tattoo;
- Sub-Q or intramuscular appliance of micro electronica;
- Freeze branding.

The *Regeling toegelaten handelingen* gives specifications on different procedures mentioned in the *Ingrepenbesluit*. It states in art. 3 that persons that keep animals on an agricultural holding may perform a number of operations such as applying ear tags, subcutaneous or intramuscular appliance of micro electronica, dehorning of bovines (provided that a veterinarian has applied local anesthetics) using the electronically hot air method on animals that are less than two months old. Or using a wire saw (and anesthetics) after the age of 6 months. They are also permitted to apply nose rings to bulls and to remove super numeral teats before the age of 4 weeks (art. 4). Procedures in which bovine animals are made infertile have to be done by a veterinarian (art. 7). No specifications are mentioned in the law on the age of castration or type of method used for the castration of animals.

The *Besluit welzijn productie dieren* is a direct translation of European Council Directive 98/58/EC. The Dutch regulation states the exact same provisions in article 3, 4, 5 and 6 as is mentioned in the European regulation mentioned on page 17 and 18.

The *Wet Dieren* states that regulations on transportation of animals should be set based on the EU Council Regulations (EC) 1/2005. It furthermore states that regulations can be set with regards to the ban on transporting certain animals, examinations to conduct during transport, the evidence that accompanies animals during transport, means of transport, distance and duration of the transport including breaks, loading, reloading and unloading of animals, the records that have to be maintained during transport, and others (art. 2.5). based on this the EU regulations are translated into the following Dutch regulations:

- *Regeling dierenvervoer 2007*
- *Regeling controleposten*

European Council Regulation (EC) 1/2005 refers to competent national authority. In art. 3 of the *Regelingen dierenvervoer 2007* it states that in the Netherlands the Food Safety Authority (Voedsel en Waren Autoriteit or VWA) is the competent authority for transport of animals. They safeguard the welfare of animals during transport. As well as the certification of transport vehicles and persons.

The application of a transportation vehicle goes through an application form available on the website of the VWA⁵⁹. The application is done by the service Dienst Wegverkeer. The actual certificate is given out by the ministry according to art. 5. There are three authorities for safeguarding every aspect during the transportation of animals. These authorities are:

- Officials of the general inspection authority of the Ministry of Agriculture, Nature and Food Quality;

⁵⁹ www.vwa.nl

- Officials of the Food Safety Authority (VWA);
- Inspectors of the national inspection authority of animal protection services.

These organizations have the authority to review all necessary documents according to the European *Council Regulation (EC) 1/2005* and can set fines in case of non compliance. Upon request the following information must be provided:

- Transportation documentation, including: origin and ownership of cattle, place of departure, date and time of departure, intended place of destination and expected duration of the journey (art. 4);
- Information on the planning, execution and completion of the journey (art. 5);
- A copy of the certificate and authorization of transport for animals (art. 6 (1)(5));
- Have a navigation system as of 1 January 2007 in which records are kept concerning the journey (art. 6 (9)).

The European regulation on control posts are translated into the Dutch *Regeling controleposten*. The requirements are an exact copy of the European requirements.

To ensure the verification and safeguarding of the *Wet Dieren en Gezondheids- en welzijnswet voor dieren* several institutions are appointed according to the following national legislation:

- *Regeling aanwijzing ambtenaren Gezondheids- en welzijnswet voor dieren.*

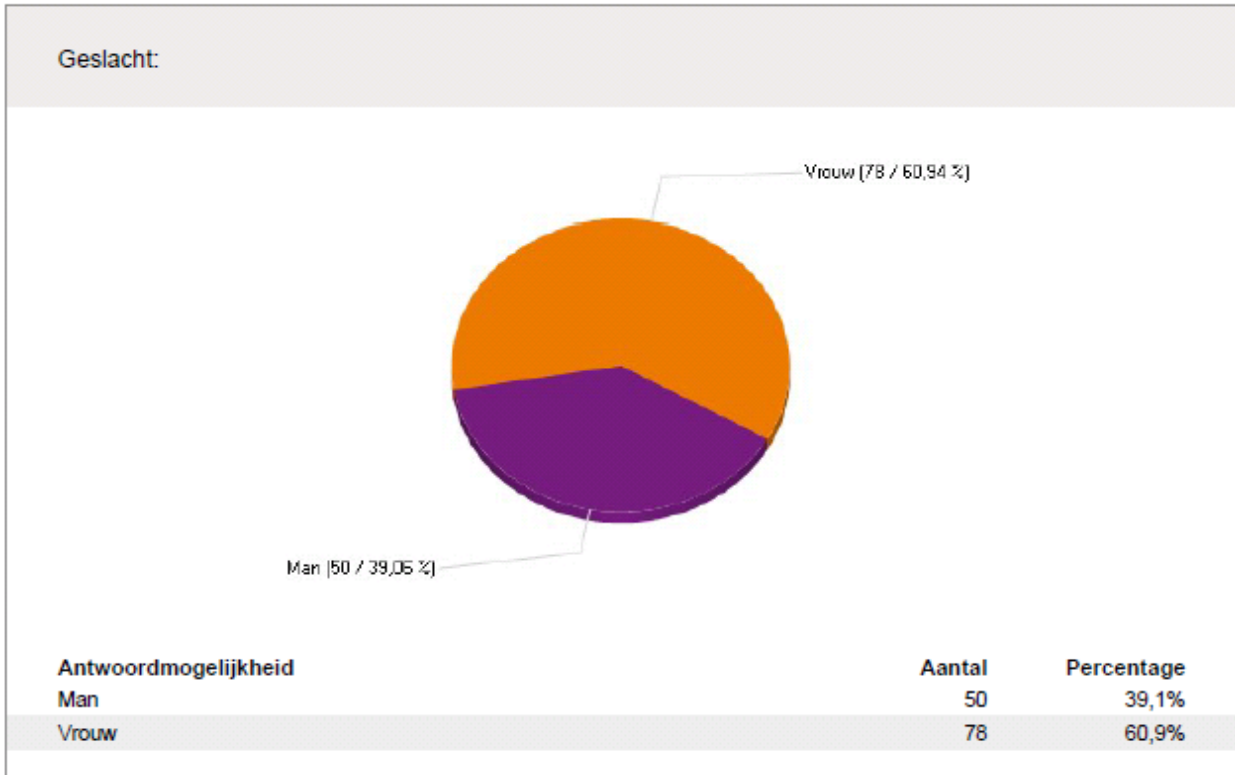
This regulation approves the following organizations for monitoring and compliance of the national animal welfare regulations:

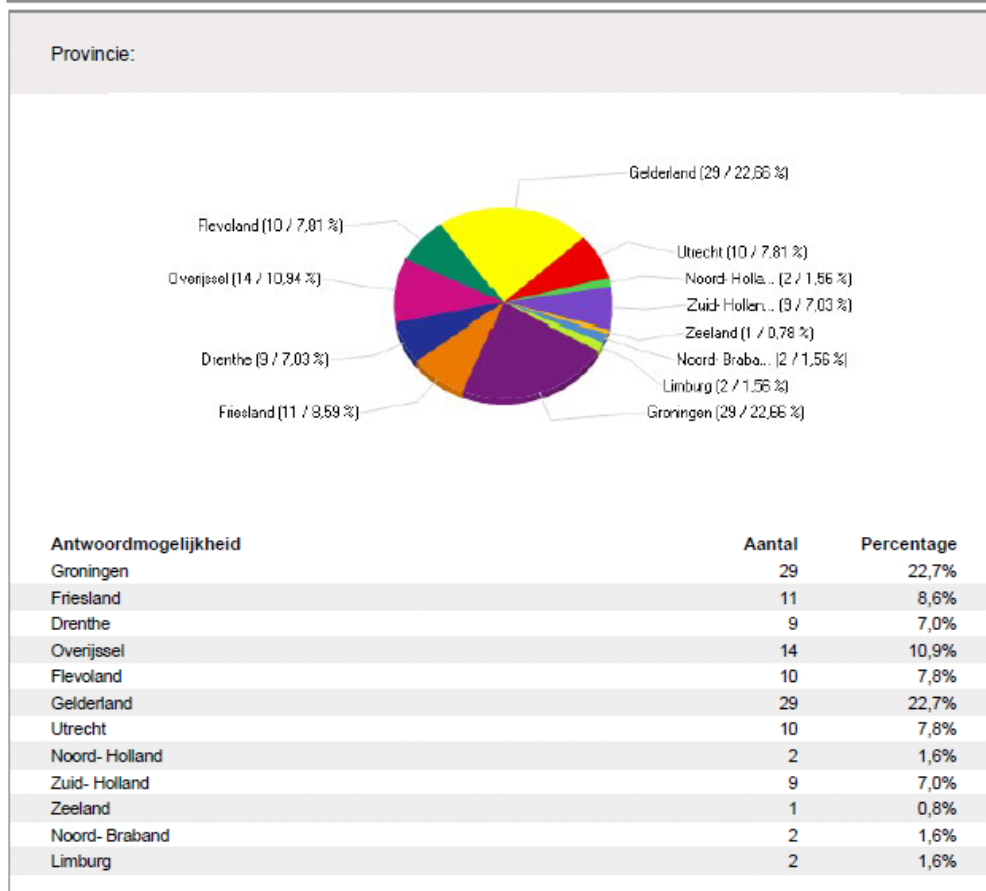
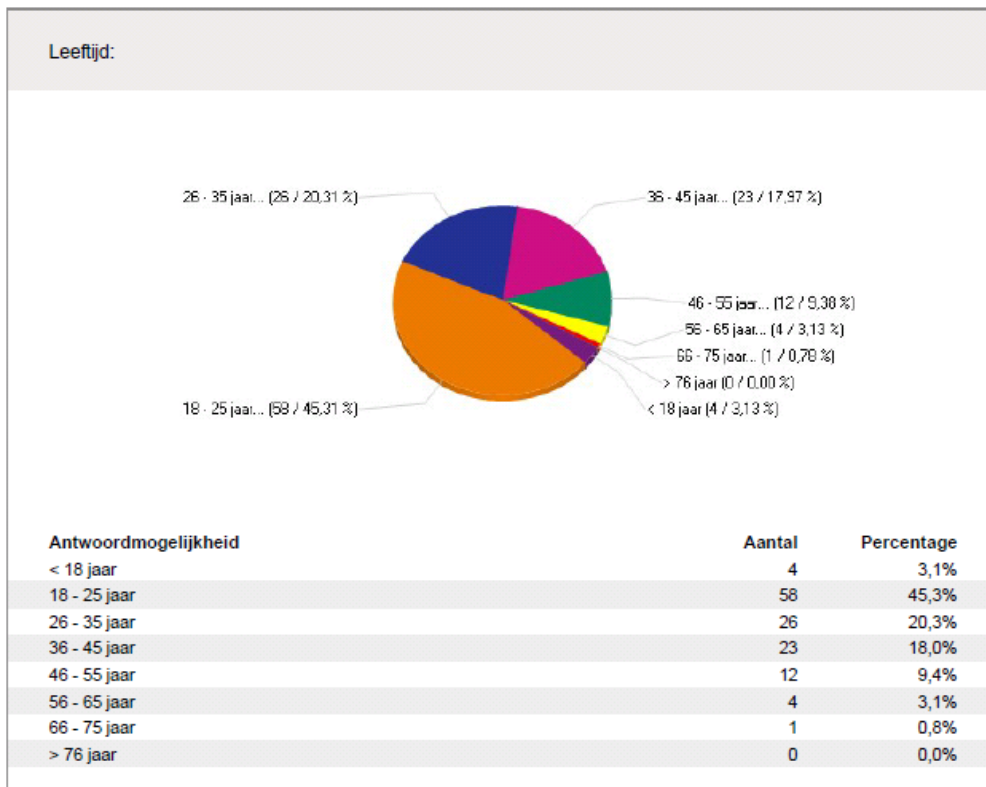
- Officials of the Food Safety Authority (VWA);
- Officials of the Dienst Regelingen;
- Officials for the investigation of criminal offenses such as prosecutors police officers and investigation officers of the special investigation services⁶⁰;
- Inspectors of the national inspection authority of animal protection services (in compliance of art. 35 to 39, 45, 55 and 58 to 59b);
- Police officers;
- Soldiers of the royal military police (Koninklijke marechaussee);
- By the Minister of Defense appointed other soldiers of the armed forces+
- Officials of the national tax office, responsible for customs;
- Officials of the environment and transport inspectorate;
- Several municipal authorities.

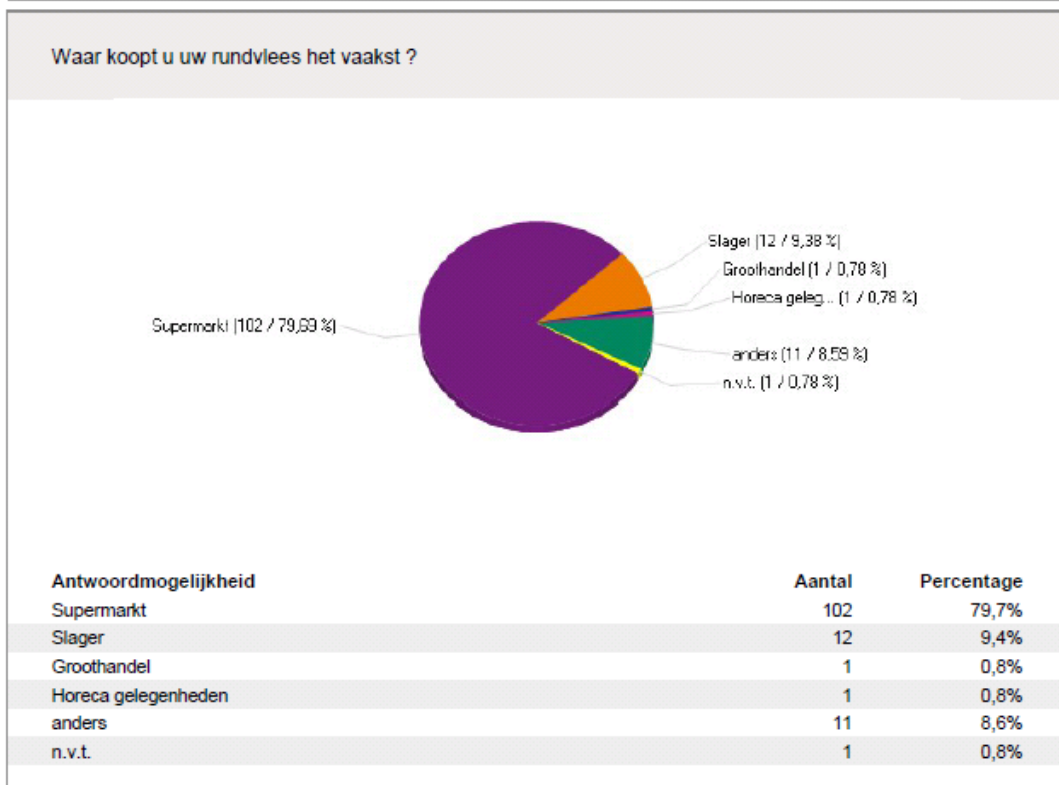
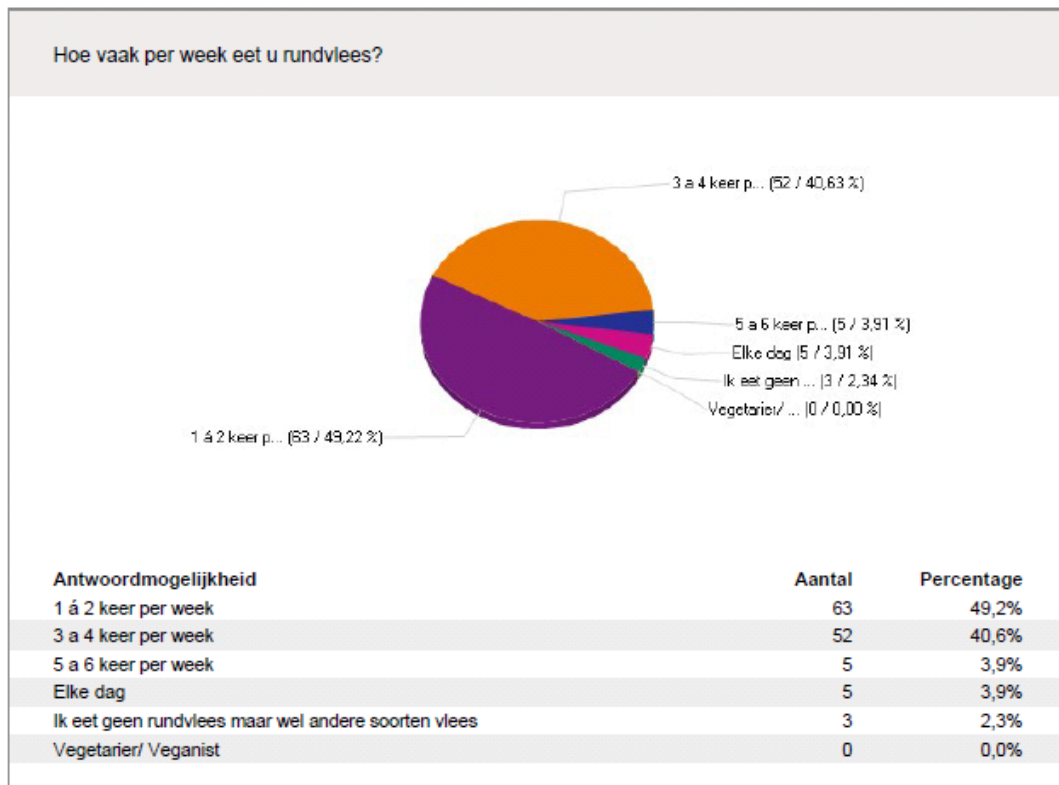
⁶⁰ Wetboek van strafvorderingen art. 141.

Annex 2. Questionnaire results

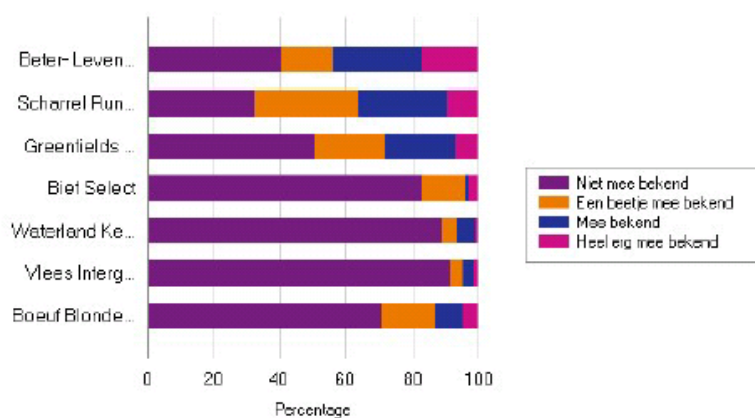
Algemene vragenlijststatistieken	
Naam Inhoud	Vragenlijst 19 vragen
Startdatum	19-02-2013 (verstreken looptijd: 48 dag(en) en 16 uur)
Einddatum	-
Afgerond	128
Begonnen	741
Uitgenodigd (per e-mail)	0
Gemiddelde tijdsduur	03:28:58 ± 19:57:37 (5,7%)
Gemiddelde tijdsspanne	03:28:58 ± 19:57:37 (5,7%)
Gemiddeld aantal sessies	1,0 ± 0,0 (0%)







Hieronder staat een selectie aan kwaliteits keurmerken die in de Nederlandse supermarkten te koop zijn. In welke mate bent u bekend met deze keurmerken?



Antwoordmogelijkheid Beter- Leven sterren van de Dierenbescherming

	Aantal	Percentage
Niet mee bekend	52	40,6%
Een beetje mee bekend	20	15,6%
Mee bekend	34	26,6%
Heel erg mee bekend	22	17,2%

Antwoordmogelijkheid Scharrel Rundvlees

	Aantal	Percentage
Niet mee bekend	42	32,8%
Een beetje mee bekend	40	31,3%
Mee bekend	34	26,6%
Heel erg mee bekend	12	9,4%

Antwoordmogelijkheid Greenfields Rundvlees

	Aantal	Percentage
Niet mee bekend	65	50,8%
Een beetje mee bekend	27	21,1%
Mee bekend	27	21,1%
Heel erg mee bekend	9	7,0%

Antwoordmogelijkheid Bief Select

	Aantal	Percentage
Niet mee bekend	106	82,8%
Een beetje mee bekend	17	13,3%
Mee bekend	1	0,8%
Heel erg mee bekend	4	3,1%

Antwoordmogelijkheid Waterland Keurmerk

	Aantal	Percentage
Niet mee bekend	114	89,1%
Een beetje mee bekend	6	4,7%
Mee bekend	7	5,5%
Heel erg mee bekend	1	0,8%

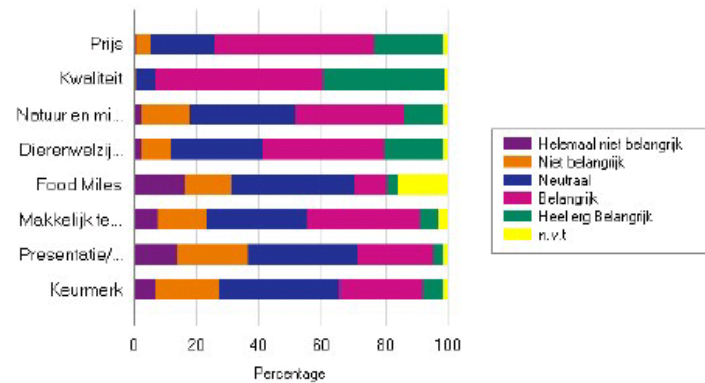
Antwoordmogelijkheid Vlees Intergratie Twente

	Aantal	Percentage
Niet mee bekend	117	91,4%
Een beetje mee bekend	5	3,9%
Mee bekend	4	3,1%
Heel erg mee bekend	2	1,6%

Antwoordmogelijkheid Boeuf Blonde d'aquaine

	Aantal	Percentage
Niet mee bekend	90	70,3%
Een beetje mee bekend	21	16,4%
Mee bekend	11	8,6%
Heel erg mee bekend	6	4,7%

In welke mate zijn de onderstaande factoren voor u belangrijk bij het aankopen van rundvlees?



Antwoordmogelijkheid Prijs

Antwoordmogelijkheid	Aantal	Percentage
Helemaal niet belangrijk	1	0,8%
Niet belangrijk	6	4,7%
Neutraal	26	20,3%
Belangrijk	65	50,8%
Heel erg Belangrijk	28	21,9%
n.v.t	2	1,6%

Antwoordmogelijkheid Kwaliteit

Antwoordmogelijkheid	Aantal	Percentage
Helemaal niet belangrijk	0	0,0%
Niet belangrijk	1	0,8%
Neutraal	8	6,3%
Belangrijk	69	53,9%
Heel erg Belangrijk	49	38,3%
n.v.t	1	0,8%

Antwoordmogelijkheid Natuur en milieu

Antwoordmogelijkheid	Aantal	Percentage
Helemaal niet belangrijk	3	2,3%
Niet belangrijk	20	15,6%
Neutraal	43	33,6%
Belangrijk	44	34,4%
Heel erg Belangrijk	16	12,5%
n.v.t	2	1,6%

Antwoordmogelijkheid Dierenwelzijn

Antwoordmogelijkheid	Aantal	Percentage
Helemaal niet belangrijk	3	2,3%
Niet belangrijk	12	9,4%
Neutraal	38	29,7%
Belangrijk	49	38,3%
Heel erg Belangrijk	24	18,8%
n.v.t	2	1,6%

Antwoordmogelijkheid Food Miles

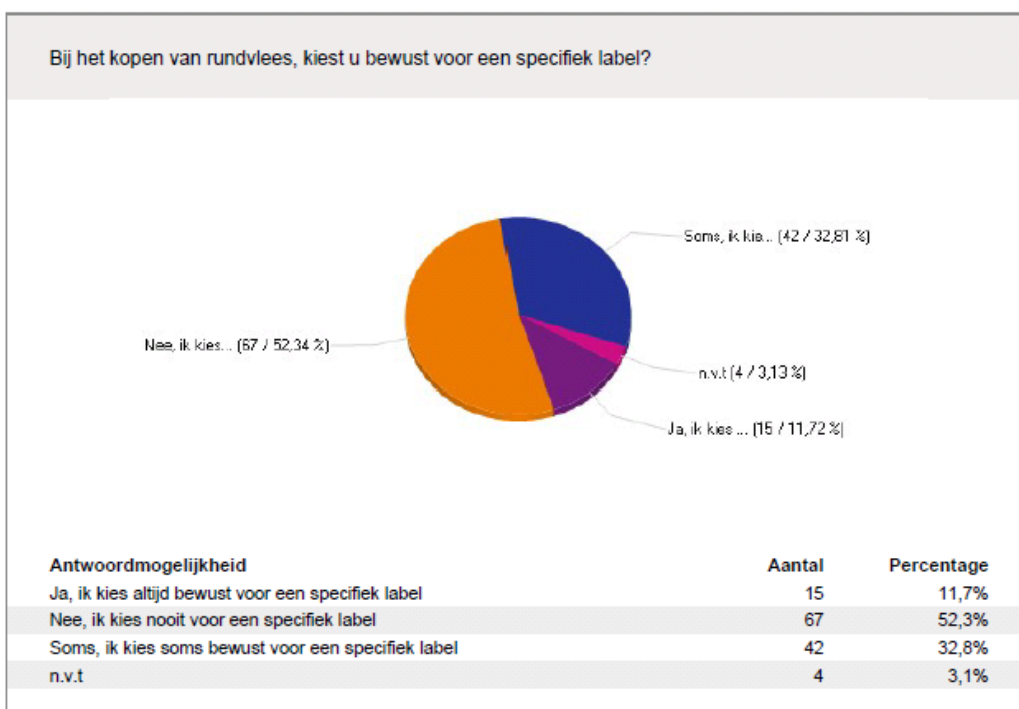
Antwoordmogelijkheid	Aantal	Percentage
Helemaal niet belangrijk	21	16,4%
Niet belangrijk	19	14,8%
Neutraal	50	39,1%
Belangrijk	13	10,2%
Heel erg Belangrijk	5	3,9%
n.v.t	20	15,6%

Antwoordmogelijkheid Makkelijk te bereiden

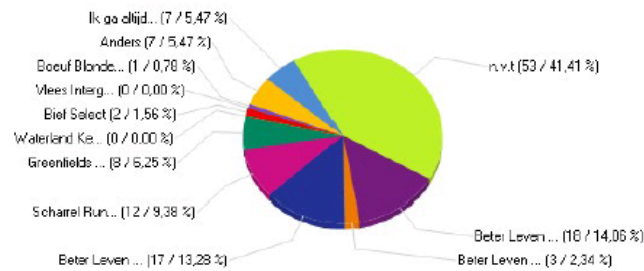
Antwoordmogelijkheid	Aantal	Percentage
Helemaal niet belangrijk	10	7,8%
Niet belangrijk	20	15,6%
Neutraal	41	32,0%
Belangrijk	46	35,9%
Heel erg Belangrijk	7	5,5%
n.v.t	4	3,1%

Antwoordmogelijkheid Presentatie/verpakking	Aantal	Percentage
Helemaal niet belangrijk	18	14,1%
Niet belangrijk	29	22,7%
Neutraal	44	34,4%
Belangrijk	31	24,2%
Heel erg Belangrijk	4	3,1%
n.v.t	2	1,6%

Antwoordmogelijkheid Keurmerk	Aantal	Percentage
Helemaal niet belangrijk	9	7,0%
Niet belangrijk	26	20,3%
Neutraal	49	38,3%
Belangrijk	34	26,6%
Heel erg Belangrijk	8	6,3%
n.v.t	2	1,6%

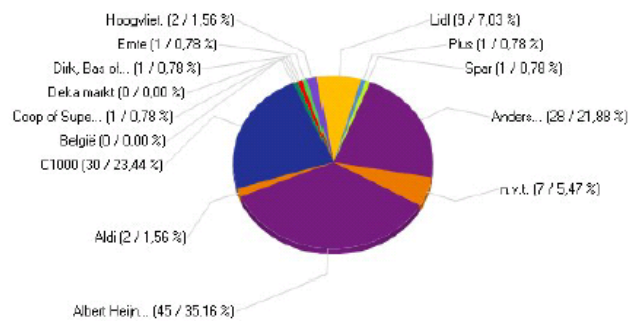


Voor welk keurmerk kiest u het meest?

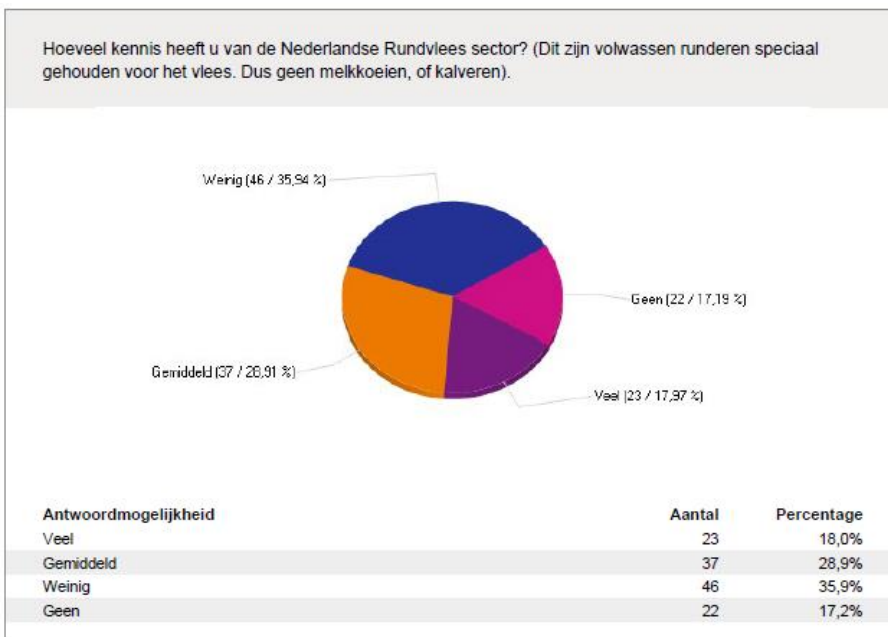
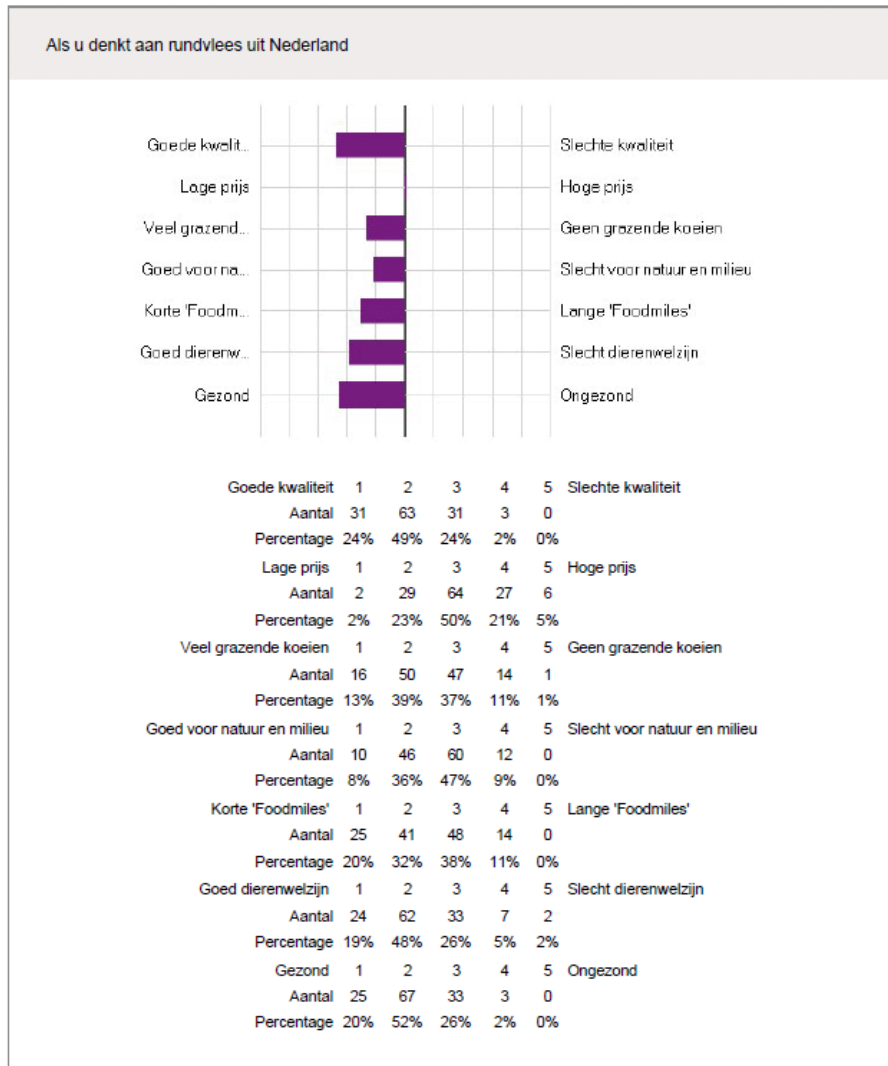


Antwoordmogelijkheid	Aantal	Percentage
Beter Leven Ster 1	18	14,1%
Beter Leven Ster 2	3	2,3%
Beter Leven Ster 3 of Biologische producten (EKO, Biologisch rundvlees, Detmer, etc.)	17	13,3%
Scharrel Rundvlees	12	9,4%
Greenfields Rundvlees	8	6,3%
Waterland Keurmerk	0	0,0%
Bief Select	2	1,6%
Vlees Intergratie Twente	0	0,0%
Boeuf Blonde d'Aquitaine	1	0,8%
Anders	7	5,5%
Ik ga altijd naar een slager en koop nooit vlees in de supermarkt	7	5,5%
n.v.t.	53	41,4%

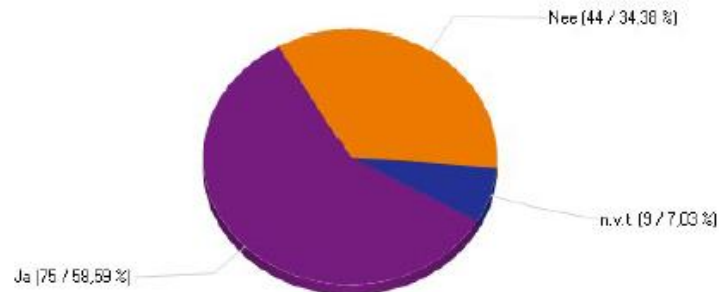
Bij welke supermarkt koopt u het vaakst uw rundvlees?



Antwoordmogelijkheid	Aantal	Percentage
Albert Heijn	45	35,2%
Aldi	2	1,6%
C1000	30	23,4%
België	0	0,0%
Coop of Supercoop	1	0,8%
Deka markt	0	0,0%
Dirk, Bas of Digros	1	0,8%
Emte	1	0,8%
Hoogvliet.	2	1,6%
Lidl	9	7,0%
Plus	1	0,8%
Spar	1	0,8%
Anders...	28	21,9%
n.v.t.	7	5,5%

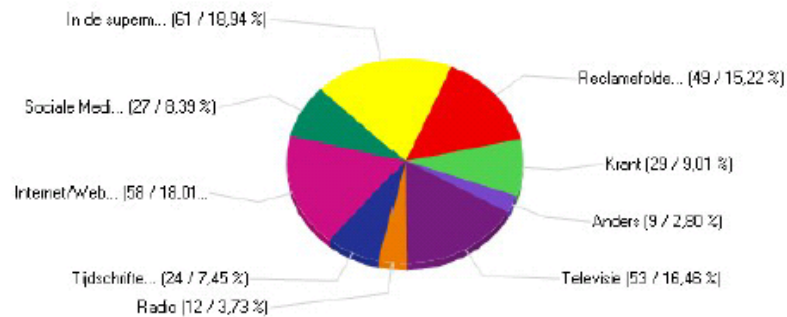


Als er meer informatie over het Nederlandse rundvlees zou komen, zou dit u helpen in het maken van uw keuzes in rundvlees?

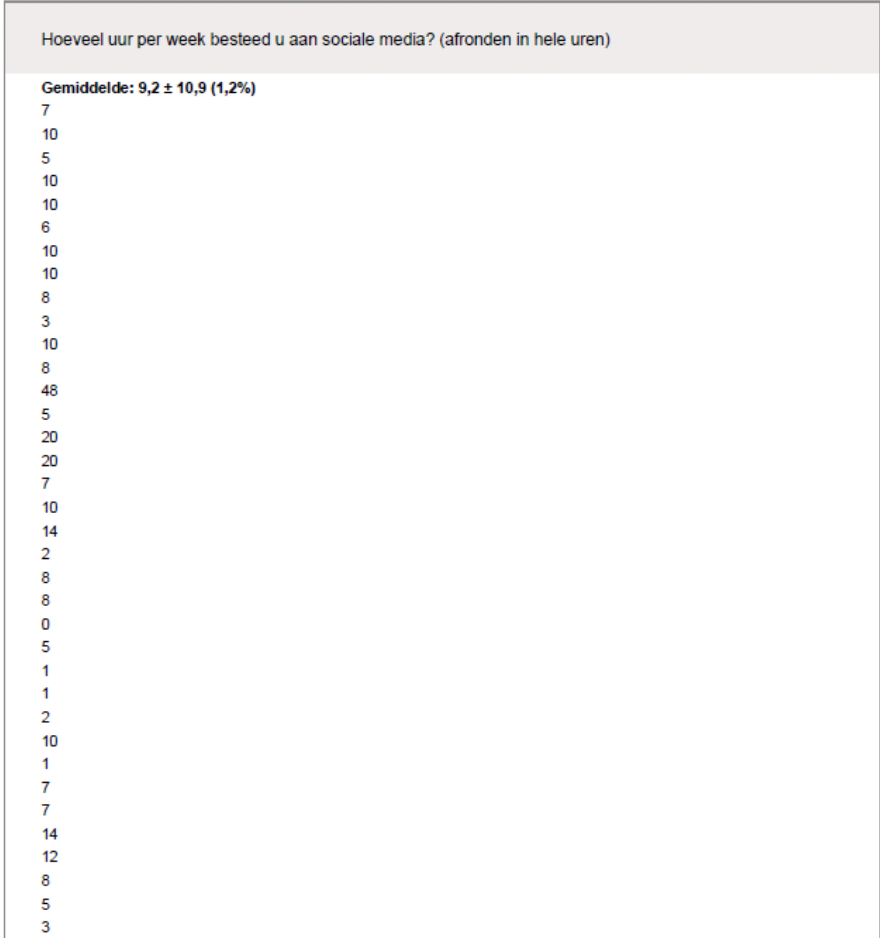
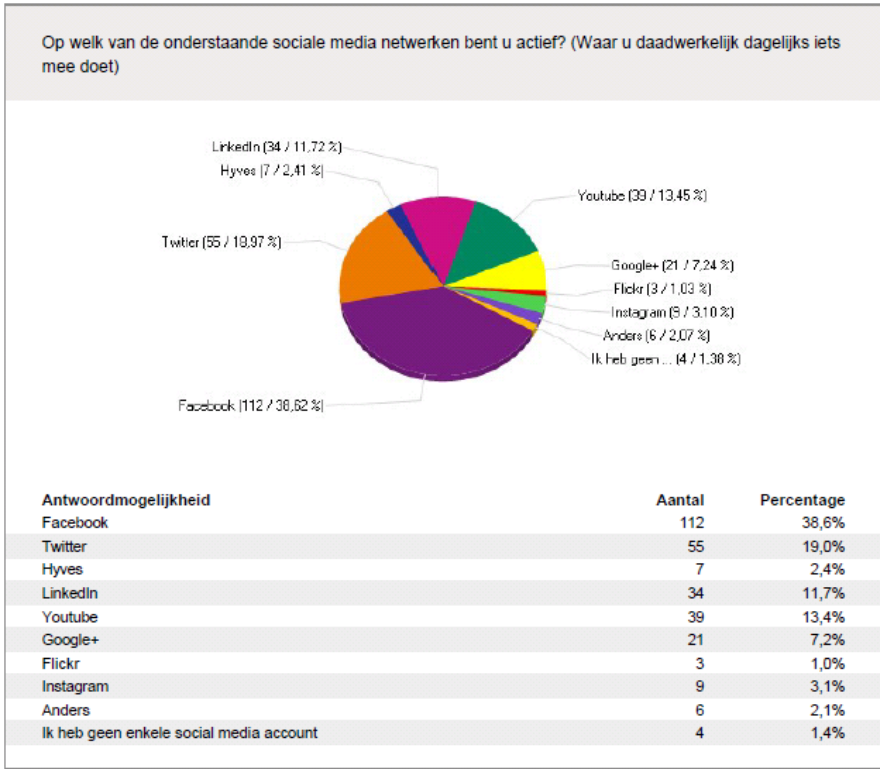


Antwoordmogelijkheid	Aantal	Percentage
Ja	75	58,6%
Nee	44	34,4%
n.v.t.	9	7,0%

Op welke manier zou u het liefste in aanraking komen met informatie over het Nederlandse rundvlees en de rundveehouders?



Antwoordmogelijkheid	Aantal	Percentage
Televisie	53	16,5%
Radio	12	3,7%
Tijdschriften	24	7,5%
Internet/Website	58	18,0%
Sociale Media	27	8,4%
In de supermarkten	61	18,9%
Reclamefolders van de supermarkten	49	15,2%
Krant	29	9,0%
Anders	9	2,8%



Gemiddelde: 9,2 ± 10,9 (1,2%)

8
5
40
7
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14
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12



The questionnaire for consumers on the importance of quality labels and the image of beef from the Netherlands was shared through Facebook and Twitter. The sharing of questionnaires through social media can be successful to reach a large amount of respondents in short period of time. However it can also lead to certain population forming. For the initial sharing a personal Facebook and Twitter account was used. Facebook had a total of 794 friends. Twitter @daanj001 had 192 followers. Facebook friends shared the questionnaire 6 times. This means that a total audience of 2.532 people have been reached. Twitter followers retweeted the link to the questionnaire 24 times researching 5.601 people on Twitter. The friends on Facebook are mostly inexperienced when it comes to agricultural matters. On Twitter there are 11 followers that shared the questionnaire that are agriculture or beef industry experts. This is a total of 3.414 people that are possibly experts in this industry. A total of 9.119 people were reached through social media. Of this 37 percent may have a larger knowledge of agriculture and beef cattle farming. This might have influenced the questionnaire results. Especially on the questions concerning the knowledge of certain quality labels and the importance of factors that influence animal welfare.

A second matter is the age category. The questionnaire results show that 45 percent of the respondents is between the age of 18 and 25. This is due to the large group of this category on Facebook. This age group has a different consumption pattern compared to the older generation and does not always buy their own meat. This may have influenced the outcome of the questionnaire as well.

Annex 3. Legislation on animal welfare in importing countries

Legislation on animal welfare can have differences in all European countries. Even though their basic laws are based on *European Council Decision 78/923/EEC* and *Council Directive 98/58/EC*. In Germany the legislation relating to animal welfare is laid down in the following documents:

- *Tierschutzgesetzes*
- *Tierschutz-Nutztierhaltungsverordnung*

The *Tierschutzgesetzes* is an act that gives responsibility to people for the protection and well being of animals. A person may not cause pain, injury or suffering to an animal (§ 1). The ministry of Food, Agriculture and Consumer Protection can adopt extra rules concerning the requirements of movement and animal needs, housing and the nature of tie up, feeding and watering, lighting conditions and the indoor climate, monitoring and the knowledge and skills of handlers.

The use of anesthesia is mandatory for surgeries and interventions that are associated with pain. There are a few exceptions. These exceptions include interventions that, in similar human interventions, do not require anesthesia. A veterinarian can also decide that the use of anesthesia would not benefit an animal. Specific cattle exceptions are:

- Castration may be done without anesthetics under the age of four weeks;
- Disbudding may be done without anesthetics under the age of six weeks (§5).

An elastic ring used for castration or dehorning is prohibited. Furthermore castration and dehorning may be done by a farmer who has a license for the castration and dehorning of calves (*Sachkundenachweis*) (§6)

Anyone that kills a bovine animal without a reasonable cause or that cause brutal or significant pain or suffering can be charged with imprisonment for up to three years or with a fine (§ 17). Furthermore the regulation is based on the *European Council Directive 98/58/EC*. No specific details are given in this regulation on the keeping of bovine animals.

The *Tierschutz-Nutztierhaltungsverordnung* is a more detailed regulation on the welfare and keeping systems of animals but does not apply to adult bovine animals. This regulation forms the base of the regulations for pork production, broiler production, calf production and the laying hen production.

The transport regulation for Germany based on *European Council Regulation (EC) 1/2005* is based on the following legislation:

- *Tierschutztransportverordnung*

The legislation on the welfare of animals in Belgium is laid down in the following regulations:

- *Wet betreffende de bescherming en het welzijn der dieren*
- *Koninklijk besluit inzake de bescherming van voor landbouwdoeleinden gehouden dieren*
- *Koninklijk besluit betreffende de toegestane ingrepen bij gewervelde dieren*

The *Wet betreffende de bescherming en het welzijn der dieren* dates back to 1986 and replaced the legislation on *Dierenbescherming* of 1975. The law is written for all animal species in all animal captivity systems. The law describes that every person that keeps an animal or cares for an animal has to take the necessary measures in accordance to its nature, its physiological and ethological needs, its health, its development, its adaptation and

domestication and to its appropriate feed, care and housing (art. 4 §1). Nobody can limit the freedom of movement in such a way that it may cause pain, suffering or injury (art. 4 §2). The lighting, temperature, humidity levels, ventilation, airflow and other environmental conditions have to be according to the physiological and ethological needs of an animal (art. 4 §3). For all these requirements additional regulations may be set for different animal species (art. 4 §4).

It is prohibited to carry out one or more procedures on bovine animals in which one or more sensitive parts of the body are removed or damaged. This does not apply for:

- Procedures of veterinary necessity;
- Procedures laid down in legislation based on disease control;
- Procedures for the purpose of limiting the reproduction functions of the species (art.17bis).

No surgical procedures are allowed on bovine animals without the use of anesthetics. The administering of anesthetics have to be carried out by a veterinarian (art. 18 §1) unless a comparable treatment for humans does not require anesthetics. A veterinarian can also decide that it is not feasible to use anesthetics (art. 18 §2). In the *Koninklijk besluit betreffende de toegestane ingrepen bij gewervelde dieren* several other authorized procedures are specified for bovine animals. These procedures are specified in Table 22.

Procedures	Special conditions	Anesthetics and pain medication
<i>Branding</i>	Prohibited since 1.1.2002	-
<i>Freeze branding</i>	Not determined	-
<i>Castration</i>	Only using surgical method or using a hemostatic clamp	Anesthesia required sedation required
<i>Vasectomy</i>	Not determined	-
<i>Removing extra teats</i>	Only using surgical method or using a hemostatic clamp	Sedation required
<i>Perforation nasal septum</i>	Only for placing nose rings in bulls using a appropriate tongs	Not required
<i>Dehorning</i>	Only when necessary for the protection and safety of personnel and other animals	Anesthesia required
<i>Removing horn tips calves</i>	Only by using thermal-cautery until 2 months of age.	Anesthesia required
<i>Perforation or ear clipping</i>	Only for the placing of eartags	Not required

Table 22. By law permitted procedures on bovine animals in Belgium.

The *Wet betreffende de bescherming en het welzijn der dieren* initiated the Raad voor dierenwelzijn (board of animal welfare). This board exists of delegates from national and regional animal protection associations, scientific and medical researchers and growers and farmers. Their task is to advice the ministry on animal related matters (art. 31).

Transport requirements for animals are set up according to groups of animals, physical condition, nature of the transport vehicle, overall conditions and the amount of time and conditions during transport. These may be specified per animal species (art. 13 §1) and are according to European *Council Regulation (EC) 1/2005*.

Several authorities are authorized for the detection and acting upon violations of the *Wet betreffende de bescherming en het welzijn der dieren*. In this same law the following are authorized for this:

- Court officers for prosecutions
- National police
- Municipal or field police
- Veterinarian inspectors
- Veterinarians for border supervision
- Veterinary officers from the Institute of Veterinary Inspection
- Other veterinarian officers assigned by the ministry that is responsible of agriculture (art. 34).

Offenses related to bovine animals that are mentioned in the *Wet betreffende de bescherming en het welzijn der dieren* are the following:

- Knowingly commit procedures that are not covered in the law and that will pointlessly kill an animal or cause mutilation, pain or injury;
- Carry out painful procedures in violation of the provision of art. 18 on anesthesia;
- Carry out amputations that are forbidden in art. 17bis (art. 35).

These offenses will lead to a penalty of a minimum imprisonment of one month and a maximum imprisonment of 3 years with a fine with a minimum of 36 BEF to a maximum of 1.000 BEF (converted this is € 1 to € 25). Minor offenses that only lead to the fine are the following:

- Stimulating the attack instinct of an animal by stirring up an animal against another;
- Administering substances that are identified as to influence the animal's performance;
- Violations to the provision of art. 4 of chapter IV on transport requirements;
- Failure to comply with measures that prohibit labor by animals beyond their strength;
- Violations of chapter VI on the killing and slaughter of animals
- Forcing the administration of food and water to animals, except for medical purposes;
- Administering substances that can cause pain or injury (except medical purposes);
- Giving animals to a person younger than 16 years;
- Sending animals by mail;
- Using animals as a price, reward or gift at a competition, lottery or gambling (art. 36).

The *Koninklijk besluit inzake de bescherming van voor landbouwdoeleinden gehouden dieren* is the Belgium translation of the European *Council Directive 98/58/EC*. The annex of the Belgium law describes the exact same requirements as the European directive.

As mentioned before the translation requirements in Belgium are based on the European regulations. The regulation in Belgium does not apply to holder's own transport of own animals. This means that they do not apply to:

- Transports that have a non commercial character;
- Transports to and from veterinary clinics;
- Transport with a commercial character that is less than 50 kilometers and that includes own transport
- Transport to and from competitions where animals are not sold;
- Transport of a single breeding animal;
- Transport in relation to the keeping of a limited number of animals as a hobby (FOD Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu 2013).

Legislation on animal welfare in the United Kingdom is laid down separately per region. This means that England, Wales, Scotland and Northern Ireland each have their own legislation documents. These regulations are similar to each other with small differences in

permitted procedures and punishments for violations of the laws on animal welfare. the following regulations exist in the United Kingdom:

- *Animal Welfare Act 2006*;
- *The Welfare of Farmed Animals (England) Regulations 2007*;
- *The Welfare of Farmed Animals (Wales) Regulations 2007*;
- *The Welfare of Farmed Animals (Scotland) Regulations 2010*;
- *Welfare of animals act (Northern Ireland) 2011*
- *The Welfare of Farmed Animals (Northern Ireland) 2012*.

The *Animal Welfare Act 2006* sets regulations on animal welfare and inspections these welfare regulations in England, Wales and Scotland. For Northern Ireland a similar act sets regulations on animal welfare. This is the *Welfare of animals act (Northern Ireland) 2011*. The *Animal Welfare Act 2006* states that harm to an animal needs to be prevented. A person is committing an offence when his act, or failure to act, causes an animal to suffer. Section 5 specifies that mutilations to the animals are prohibited. These include procedures which involve interference with the sensitive tissues or bone structures of the animal other than for the purpose of medical treatment. In relation to this the national authorities have set regulations concerning the approved mutilations and procedures on cattle. These regulations are:

- *The Mutilations (Permitted Procedures)(England) Regulations 2007*;
- *The Mutilations (Permitted Procedures)(Wales) Regulations 2007*;
- *The Prohibited Procedures on Protected Animals (Exemptions)(Scotland) Regulations 2007*;
- *The Welfare of Animals (Permitted Procedures by Lay persons) Regulations (Northern Ireland) 2012*.

The regulations in the different regions of the United Kingdom are mainly based on conditions laid out in the European *Council Directive 98/58/EC*. These regulations state in their schedules (schedule 2 for England and Wales and schedule 1 for Scotland and Northern Ireland) the permitted procedures. These permitted procedures are seen in Table 23. In the schedules additional requirements for the procedures are mentioned. Anesthetics must be used in the following cases:

- Castration of bulls older than two months (in England and Wales);
- Embryo collection and/or transfer using a surgical or non-surgical method (in England, Wales and Northern Ireland);
- Dehorning (in England, Wales and Northern Ireland);
- Disbudding using a method other than chemical cauterization (in England, Wales and Northern Ireland);
- The removal of supernumerary teats of animals older than 3 months (in England and Wales).

Northern Ireland only permits the removal of supernumerary teats before the age of 3 months with the use of anesthetics. For Scotland no specifications are given on the additional requirements of the permitted procedures.

	England	Wales	Scotland	N. Ireland
Identification procedures				
<i>Ear clipping</i>	√	√		
<i>Ear notching</i>	√	√		√
<i>Ear tagging</i>	√	√	√	√
<i>Freeze branding</i>	√	√	√	√
<i>Micro- chipping</i>	√	√	√	√
<i>Tattooing</i>	√	√	√	√
Procedures for reproduction				
<i>Castration</i>	√	√	√	√
<i>Embryo collection or transfer (surgically)</i>	√	√	√	
<i>Embryo collection or transfer (non-Surgically)</i>				√
<i>Ovum transplantation</i>	√	√	√	√
<i>Vasectomy</i>	√	√	√	
<i>Spaying</i>			√	
<i>Artificial insemination</i>				√
Other management procedures				
<i>Dehorning</i>	√	√	√	√
<i>Disbudding</i>	√	√	√	√
<i>Nose ringing</i>	√	√	√	√
<i>Removal supernumerary teats</i>	√	√	√	√

Table 23. Permitted procedures for bovine animals in England, Wales, Scotland and Northern Ireland.

Furthermore, the *Animal Welfare Act 2006* states that a person needs to ensure that the needs of an animal for which he is responsible are met to the extent required by good practice (section 9). This means that they need to provide a suitable environment, a suitable diet, allow for animals to exhibit normal behavior patterns, provide separate housing for different animal species and provide protection from pain, suffering, injury and disease. The schedules (schedule 7 for England, Wales and Northern Ireland and schedule 5 for Scotland) state additional duties of a person responsible for cattle. These duties are:

- Where lactating dairy cows or calving cows are kept in a building they shall have access at all times to a well drained and bedded laying area (this is not mentioned in schedule 5 of Scotland);
- Where any calving cow is kept in a building they shall be kept in a pen or a yard which is of such size as to permit a person to attend the cow and is separate from other livestock.

In regulations on welfare of farmed animals for all regions a reference is made to the obligation of being acquainted with the code of practice related to the animal. This document needs to be available on a farm. This document is, however, not obligatory to comply with.

Regulations on transport in the United Kingdom are a direct translation of the European Council Regulation (EC) 1/2005. This regulation is translated into the following legislation:

- *The Welfare of Animals (Transport)(England) Order 2006*
- *The Welfare of Animals (Transport)(Wales) Order 2007*
- *The Welfare of Animals (Transport)(Scotland) Regulations 2006*
- *The Welfare of Animals (Transport) Regulations (Northern Ireland) 2006*

The differences in these legislations are the competent authority for the authorization and control of transport. These are done by the following institutions in the following regions:

- England: *Secretary of State*;

- Wales: *National Assembly for Wales;*
- Scotland *Scottish Ministers;*
- Northern Ireland: *Department of Agriculture and Rural Development.*

These organizations give authorization to transporters, give out certificates of competence, give out certificates of approval of means of transport by road and certificates of approval of livestock vessels (Section 20 (1)). They are also the authority for receiving notifications of changes relating to authorizations, receiving relevant documents, checking and inspecting journey logs, carrying out audits related to long journeys, record information related to livestock vessels, inspecting livestock vessels and taking action in case of non compliance or infringements (section 20 (2)).

If an inspector decides that animals are being transported under non compliance of the national orders or regulations he may require that person in charge of the animal to take any necessary actions to ensure compliance. The inspector may prohibit the transport of an animal for an indefinite or a specified period of time. He may also specify conditions under which the animal may be transported or that the journey needs to be completed or the animals have to be returned to their place of departure. He may require animals, that are not fit enough to complete their journey, to be unloaded, watered, fed or rested. He may require animals to be held in a suitable accommodation with appropriate care until the problem is solved, require a humane slaughter or killing and require a means of transport or container to be repaired or replaced (section 24).

The *Animal Welfare Act 2006* also describes the power of inspectors and inspections. Special regulations may be set to promote animal welfare. When a person does not comply to these regulations he will risk an imprisonment of a maximum of 51 weeks and a maximum fine of £ 5.000 (section 12).

An inspector may take steps to alleviate the animal's suffering, for example taking an animal in possession. They may, however, not destroy an animal. This can only be done after the certification of a veterinarian. When someone does not comply with the regulations on unnecessary suffering, mutilation or the administering of poisons a person can risk a maximum imprisonment of 51 weeks with a maximum fine of £ 20.000 (section 32). Non compliance with regulations concerning animal welfare, licensing and registration (section 9,13(6) and 34(9)) can lead to a maximum imprisonment of 51 weeks with a maximum fine of £ 5.000. Next to these penalties a disqualification for owning animals after a prosecution and seizure of animals can be a result of non compliance.

The department for Environment, Food and Rural Affairs (Defra) has been working closely together with the Local Authorities Coordinators of Regulatory Services (LACORS)⁶¹ who are active in Wales, Northern Ireland and Scotland and who is responsible, together with local authorities, to safeguard the *Animal Welfare Act 2006*.

The welfare act is a 'common informers' act' which means that anyone can bring an offence to prosecution. The RSPCA is an important player in investigating offences and bringing them to the prosecution. The RSPCA however does not have formal enforcement under the act and will have to be accompanied by the local authority, police officers or by animal health inspectors (Defra 2008).

Legislation in Ireland concerning animal welfare is also based on the European *Council Directive 98/58/EC* and consist of the following national regulations:

- *European Communities (Welfare of farmed animals) Regulations 2010*

⁶¹ See also the LACORS website: <http://www.lacors.gov.uk/lacors/Home.aspx>

- *Protection of animals kept for farming purposes Act 1984*

A person shall take the necessary steps to ensure the welfare of an animal for which he or she is responsible. This is to ensure that the animal is not caused any unnecessary pain, suffering or injury. They shall ensure that the conditions under which an animal is bred or kept is according to its physiological and ethological needs according to schedule 1 of *European Communities (Welfare of farmed animals) Regulations 2010*. This schedule is a direct translation of the requirements laid down *European Council Directive 98/58/EC*.

The regulation *European Communities (Welfare of farmed animals) regulations 2010* states that the minister may publish or cause to publish codes of practice or to adopt a code of practice published by another person. It is obligated for a farmer to have these codes available on the farm (section 3).

Transportation regulations according to the *European Council Regulation (EC) 1/2005* are set in the following legislations:

- *European Communities (Protection of Animals During Transport) Regulations 2006*
- *Disease of Animals (Animal Transport)(Roll-on Roll-off vessels) order 2007*

In relation to the European regulation there are a few differences in the Irish regulations. Schedule 1, chapter 1 of the regulation mentions that animals are considered not fit for transport when they are likely to give birth during the carriage or when an animal has given birth in the past 48 hours. This while the European regulation states that animals are seen as unfit for transport when 90 percent of the gestation is completed or a week after giving birth.

Furthermore the Irish regulation states the authorized officers who are authorized for the inspection on transportation vehicles. They include the, by the ministry, authorized officers, members of the Garda Síochána or an officer of Customs and Excise and authorized officers or a veterinary expert, by or acting on, the authority of the Commission of the European Communities. The powers of the Authorized Officers are similar to that of the United Kingdom.

The requirements set in the regulation *Disease of Animals (Animal Transport)(Roll-on Roll-off vessels) order 2007* is mainly focused on transport regulations by sea.

When a person does not comply with the rules laid down in *European Communities (Protection of Animals During Transport) (Regulations 2006)*. He shall be liable on a summary conviction to a maximum fine of € 5.000 or a maximum imprisonment of 6 months.

According to *European Communities (Welfare of farmed animals) regulations 2010*, when an officer, assigned by the minister, suspects that animals are present or have been present on a premises that have been killed, slaughtered, processed, stored, or where there are documents relating to the animals on the premises it means that a private dwelling or search warrant (section 31 (3)) may be given out by the judge of the District Court (section 32 (1)). The officer may then enter to do the following:

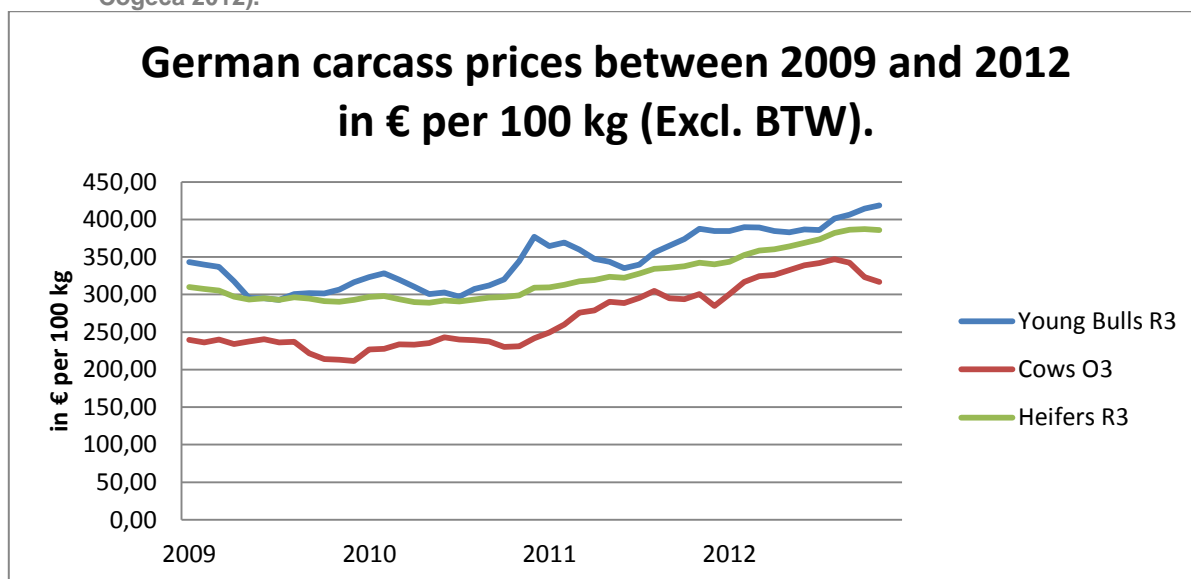
- Search the premises;
- Stop a person, vehicle, vessel or container;
- Examine an animal, vehicle, vessel or container or other matters that may have been used in relation to animals;
- Take samples from an animal, feed or other articles, substances or liquids for tests, analyses, examinations or inspections;
- Require the production of a document relating to an animal, feed, vehicle, vessel or container or any other object and retain this for as long as necessary;

- Give direction to, or request information of a person regarding animal feed, vessels, vehicles, containers, premises or any other matter;
- Require the name and address of a person and the name and address of any other relevant person;
- Require of a person the information of the ownership, identity, and origin of animal feed;
- Make a record in writing or by a photography;
- Mark or otherwise identify an animal, feed or a sample taken.

When an authorized officer suspects non compliance the officer may search a person or seize and detain or dispose of an animal, a carcass, animal products, an animal by product, animal feed, food, vessels, vehicle, containers, equipment, machinery or any other matter (section 31 (2)). Non compliance with the regulations on animal welfare can lead to a conviction with a maximum fine of € 5.000 and a maximum imprisonment of six months. In case of conviction on indictment a maximum fine can go up to € 100.000 and a maximum imprisonment of 3 years (section 41(b)(i)).

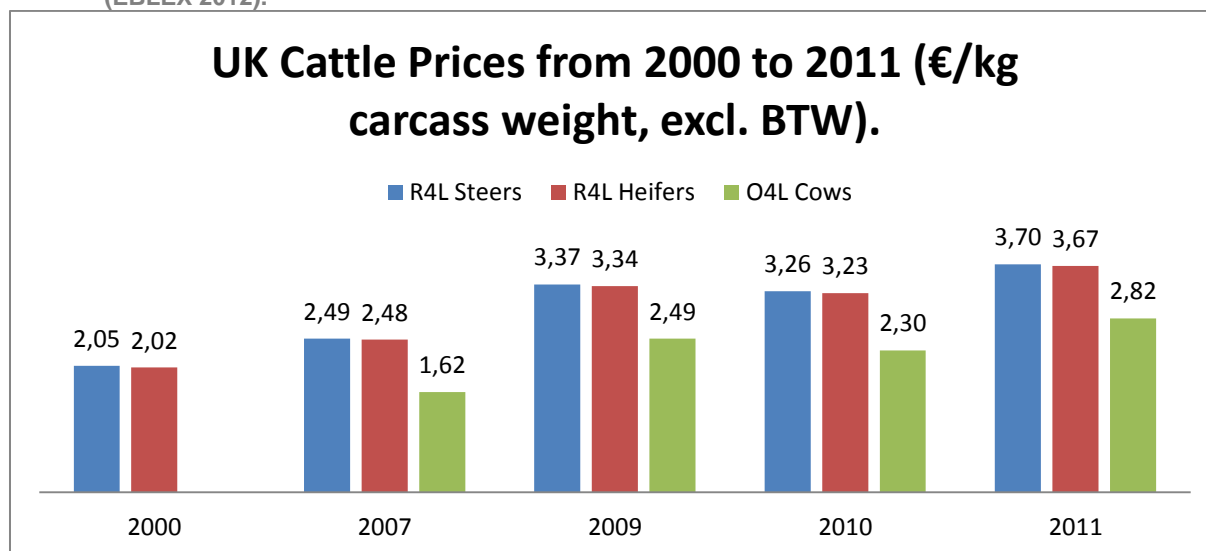
Annex 4. Reference carcass prices in importing countries

Figure 23. German reference prices between 2009 and 2012 in Euro per 100 kilograms (Copa-Cogeca 2012).



The carcass prices in Germany have seen an increase in 2012 compared to 2011. The price for young bulls with an R3 classification has increased with a little over eight percent. The price for cows with an O3 classification has increased with 5,4 percent and the price for heifers with an R3 classification has increased with 12,7 percent. These figures are found in Figure 23.

Figure 24. United Kingdom reference prices between 2000 and 2011 in Euro per 100 kilograms (EBLEX 2012).⁶²



The prices mentioned in Figure 24 are average prices throughout the entire United Kingdom. As the trend shows they have been significantly increasing between 2000 and 2011. Between 2010 and 2011 the prices for steers with an R4L classification have increased 13,5 percent. The prices for heifers with an R4L classification has increased with 13,6 percent.

⁶² Conversion 1 GBP = 1,1768 Euro

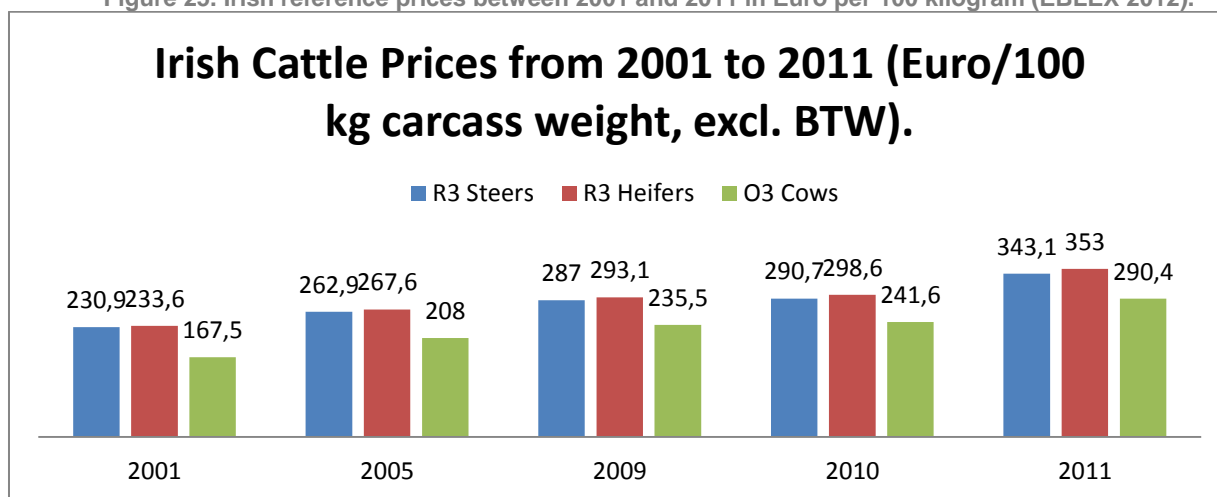
The price for cows with an O4L classification has increased with 22,6 percent. On December 29th of 2012 the cattle prices for steers with an R3 classification, heifers with an R3 classification and cows with an O+3 qualification are found in Table 24.

	Southern	Central	Northern	Scotland
R3 Steers	€ 4,27	€ 4,32	€ 4,40	€ 4,37
R3 Heifers	€ 4,26	€ 4,32	€ 4,34	€ 4,33
O+3 cows	€ 3,17	€ 3,39	€ 3,25	€ 3,50

Table 24. Cattle prices in Euro per kilogram carcass weight on 29 of December 2012 in the United Kingdom (EBLEX 2013).

In Table 24 a difference is given between different regions in the United Kingdom. This shows that the highest price per kilogram was paid in the northern part of the United Kingdom for steers and heifers. For cows the highest prices was received in Scotland.

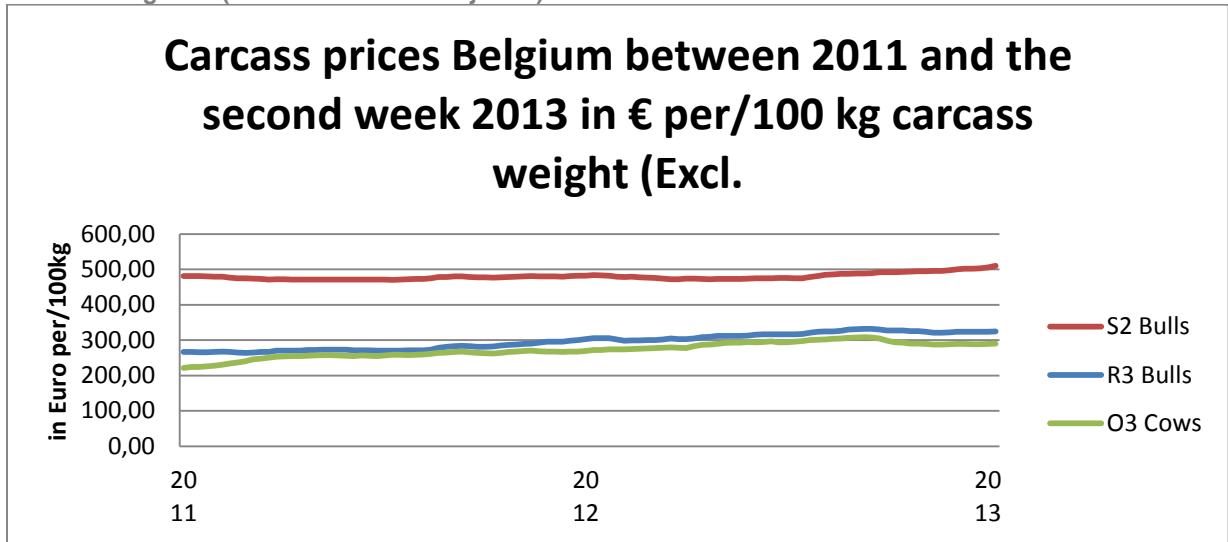
Figure 25. Irish reference prices between 2001 and 2011 in Euro per 100 kilogram (EBLEX 2012).



The Irish cattle prices for all categories have grown substantially. The price for steers with an R3 classification has increased with 49 percent between 2001 and 2011. The price for heifers with an R3 classification has increased with 51 percent and the price for cows with an O3 classification has increased with 73 percent in this time period. The cattle prices in 2012 have increased even more in 2012. In December of 2012 steers with an R3 classification were priced at € 3,83 per kilogram. For heifers with an R3 classification this was € 4,01 per kilogram and for cows with an O3 classification this was € 3,20 (Board Bía^a 2013).

The reference prices for Belgium are given for bulls with a classification of S2, Bulls with a classification of R3 and cows with a classification of O3. The prices between 2011 and the second week of 2013 are given in figure 33.

Figure 26. Belgium reference prices between 2011 and the second week of 2013 in Euro per 100 kilograms (Landbouw en Visserij 2012).



The average carcass price in 2011 for bulls with a classification of R3 was € 2,76 per kilogram which increased in 2012 to an average of € 3,16 per kilogram. The price for a cow with a classification of O3 the average price in 2011 was € 2,55 per kilogram. This increased to an average of € 2,90 per kilogram in 2012. The average price of a bull with a classification of S2 was € 4,76 per kilogram in 2011. This has increased to € 4,83 per kilogram in 2012. On the 13th of January 2013 the average price for a bull with a classification of S2 was € 5,10 per kilogram.

Annex 5. Quality label analysis

According to the information given in chapter 2.3.3, on the quality labels of importing countries, and according to the information of chapter 2.2.1 (ecological), on the Dutch quality labels, an analysis is made according to the following categories and definitions:

- *Space requirements*: the space requirements for an example beef cow with a reference weight of 600 kilograms.
- *Feed space allowance*: the amount of space required for comfortable feeding conditions for a beef cow with a reference weight of 600 kilograms.
- *Floors*: looking at the best conditions of the floor for bovine animals. With slatted floors being worse than non slatted floors, straw filled being better than not straw filled and groves in the concrete for non slip floors being better than even floors that are prone to be slippery.
- *Calves*: the best circumstances under which a calf is kept. With suckling and keeping with the mother being better than kept individually.
- *Castration*: the best circumstances under which a bull is castrated. Looking at the use of anesthesia, the age limits, use of veterinary assistance.
- *Disbudding*: the best circumstances under which calves are disbudded looking at the method used to disbud, use of anesthesia and age limits.
- *Dehorning*: the best circumstances under which a bovine animal is dehorned looking at the maximum age for dehorning, the method used for dehorning and the use of anesthesia.
- *Breeding bulls*: the best circumstances under which a breeding bull is kept looking at pen size, lying area and the exercise area.
- *Transport*: the best circumstances under which a bovine animal is transported looking at limitations set through the quality label next to requirements set in the *European Council Regulation (EC) 1/2005*.
- *Audits*: The frequency of audits that is hold for each quality label to ensure compliance to animal welfare requirements.
- *Grazing*: the amount of time that animals have to spend grazing according to each quality label looking specifications that are given for each quality label in relation to the days and hours of the day that are spend grazing.
- *Accreditation*: the quality label may or may not be accredited through their national accreditation system.

There are seven quality labels compared to each other in this analysis. Each category will be graded using a ranking system. Given a 6 for the best possible situation and given a 0 for the worst possible situation. When a quality label does not have one of these categories specified in their documentation on the keeping of animals a (-) will be noted. This (-) is worth 0 points. In this case the ranking will not be from 6 to 0 but from 5 to 0. When two quality labels have a (-) noted for a category the ranking will be from 4 to 0 and so on. This system will allow for each category to identify the best quality label. After all categories are ranked the total points are added up and the quality label with the highest points has the best requirements on animal welfare. The outcome of this ranking is seen in Table 25.

	<i>Beter Leven ster 1</i>	<i>Scharrel rundvlees</i>	<i>Bord Bia (Greenfields)</i>	<i>Red Tractor</i>	<i>Freedom Food</i>	<i>Meritus</i>	<i>QS Qualitätssicherung</i>
Space requirements	4	2	3	1	6	5	-
Feed space allowance	4	-	3	2	1	-	-
Floors	3	3	1	2	3	-	-
Calves	3	4	1	1	2	-	-
Castration	3	5	2	1	1	4	-
Disbudding	-	-	2	1	3	-	-
Dehorning	3	5	1	2	4	-	-
Breeding bulls	2	4	-	-	3	1	-
Transport	2	3	-	-	1	-	-
Audits	2	3	1	1	2	1	2
Grazing	2	3	1	-	-	-	0
Tethering (y/n)	2	2	-	-	2	1	-
Accreditation	0	0	1	1	1	1	1
Totals	30	32	16	12	29	13	3

Table 25. Quality label ranking per category.

According to the ranking system the quality label that has the best requirements related to animal welfare is the Dutch *Scharrelrundvlees*. A close second is *Beter Leven Ster 1* and the third best quality label is *Freedom Foods* from the United Kingdom.

Annex 6. Complete minutes and overview of the symposium 'Dutch Beef' (in Dutch)

Symposium 'Nederlands Rundvlees', 3 april 2013 te Elst

<i>Kenmerk</i>	Notulen symposium Nederlands rundvlees
<i>Bestemd voor</i>	Vakgroep LTO Vleesveehouderij
<i>Vorbereid door</i>	E. Daanje
<i>Datum voorbereid</i>	4 april 2013
<i>Route</i>	-
<i>Doel bespreking en beslispunten</i>	Verslag van de discussie tijdens het symposium Nederlands Rundvlees.
<i>Hoofdpunten</i>	<p>Naar aanleiding van de presentatie over het onderzoek naar het beter vermarkten van Nederlands geproduceerd rundvlees wordt er tijdens het symposium een discussie gevoerd over wat nou de beste strategie is met betrekking tot het vermarkten van het vlees. Hieronder volgt een uitgebreide samenvatting van het</p> <p>Er wordt een opmerking gemaakt (Door Frank Tillemans) dat de oudere consument meer neigt naar het aankopen van rundvlees in vergelijking met de jongere consument. (Leon Moonen) Daar ligt de uitdaging, om meer jongeren te laten vragen naar rundvlees. Het vlees zal hierbij waarschijnlijk wel bewerkt moeten worden zodat het aan de consumptie patronen (makkelijk en snel te bereiden) zal voldoen. (Frank) geeft de suggestie of het kwaliteit vlees bij de slager niet beter is dan bij de supermarkt. (Leon) ook in de supermarkten ligt kwaliteit e.g. Heijdra levert ook aan supermarkten. (Gerrit van Zalk, Boni) Boni onderscheidt zich niet in Nederlands rundvlees maar denkt Europees. Het is geen enkel probleem om hier ook uit de voorraad te trekken. (Leon) Toch willen wij ons profileren dat Nederlands geproduceerd rundvlees het beter doet op dierenwelzijn, foodmiles en andere milieu aspecten. Er zijn geen ambities om Jumbo en Albert Heijn te belevieren maar wel de andere sectoren.</p> <p>(Meat your Own) Wat zou er gecommuniceerd moeten worden over Vlees zodat het een meerwaarde heeft voor de retail? (Leon) Op het gebied van dierenwelzijn produceren we over iedereen heen. Wakker Dier, met name, is daar zeer kritisch op (ook op welzijn in het buitenland met betrekking tot onverdooft castreren en onthoornen). (Meat your Own) Ja, maar hoe communiceer je dat? (Leon) Transparantie moet voorop. "de tijd is aangebroken dat de bedrijven weer open gesteld worden voor publiek." Voorheen waren het gesloten bedrijven. Dit was om allerlei redenen (dierziektes, etc.) Nu is het tijd om de consument te laten zien wat we doen op de boerderij. Eventueel in combinatie met een keuken, mensen laten werken met het vlees. Dat is een goede vorm van transparantie. Dit moeten wij als vakgroep naar onze achterban uitstralen "Wordt transparant!". We doen veel aan natuur onderhoud en dat weten consumenten vaak</p>

	<p>niet. We zijn economisch en ecologisch. Het natuurbeheer zal in de toekomst meer onder de aandacht komen. Dit zal meer benadrukt worden.</p> <p>(Frank) Hoeveel procent is 3xNL. Volgens mij wordt meer dan 70 procent van de runderen in het buitenland geboren.</p> <p>(Leon) Wij weten, en dat weet de consument niet. Dat natuur onderhoud door een niet rendabel ras ongeveer €1.500 per dier per jaar kost. Met economische rassen wordt dit bespaard (voor de belasting betaler).</p> <p>(Jos Bolk) Wat kunnen we als totale keten doen om te versterken? We moeten naar een verdien model waarbij de boer niet omvalt, want daar heeft de retail niks aan. Maar de retail en groothandel moeten ook niet omvallen. (Harrie Jansen) De groothandel is nodig voor het volledig verwaarden van een rund. Daarbij moet je naar het buitenland kijken. Want de Nederlandse consument eet voornamelijk de lagere kwalitatieve delen. Dit terwijl de dieren in Nederland misschien wel allemaal van top kwaliteit zijn. (Peter Lutke Veldhuis) Er wordt inderdaad veel meer gehakt vlees verkocht. Dit is door de economische crisis en de consumptie patronen. Wij maken bewust de keuze om stiertjes uit Duitsland en België te halen. Dit omdat wij 52 weken per jaar de zelfde continue kwaliteit willen leveren en dat kan niet met het geringe aanbod dat op de Nederlandse markt wordt gegeven. 3xNL daar kan ik niet zoveel mee. Het is een goed idee voor boerderij verkoop en 1 op 1 verkoop aan de slager op kleine schaal. De import van stiertjes moet wel zo blijven want de komende jaren zal het aanbod Nederlandse stiertjes of runderen niet groeien, er zijn teveel bedreigingen.</p> <p>(Guus Laeven) Brazilië wordt onze grootste concurrent als de importhellingen er af gaan. Ik ben niet onder de indruk van dierenwelzijn in Nederland. Een verdoving is makkelijk te regelen om alles op orde te krijgen. Is er niet iets anders te bedenken waarop Nederlands rundvlees een meerwaarde heeft die direct te vertalen is naar de consument? Leon verdedigd de sector voor een 'License-to-produce'. Maar de kreet moet zijn "Not to avoid, but to preach".</p> <p>(Leon) Onderzoek van de Hogere Hotel School in Maastricht zegt dat het regionale product voor de consumenten steeds belangrijker kan worden. Daar kan de sector duidelijk op inzetten.</p> <p>(Anita Heijdra) Op duurzaamheidsaspecten wordt het goed op gedaan maar dat dragen we met zijn allen niet uit. Het mee doen aan een Beter Leven kenmerk dan haal je eigenlijk dat weg wat je juist wilt promoten, het kwaliteitsrundvlees in Nederland. Dat vlees komt ook van de dikbil boeren. (Leon) We zeggen zeker niet dat Beter Leven een goede optie is. (Anita) "Hoe doe je het als Nederlandse sector goed?" je moet als sector 1 visie uitdragen. Allemaal verschillende aspecten voor verschillende labels is niet de oplossing. 1 visie is dat wel. (Harrie) In Ierland is het "Origin Green" Label bekend daar worden bijna alle vleesveebedrijven in meegenomen (ongeveer 90 tot 95 procent) door de Bord Bia om het op een hoger vaandel te tillen. (Anita) er moet wel een houvast zijn dat gecontroleerd kan worden</p>
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	<p>door een onafhankelijke controleur.</p> <p>(Meat your Own) Transparantie is het belangrijkste. De consument gaat liever aan de boer zelf vragen hoe een product gemaakt wordt. Er is behoefte aan meer transparantie maar dat moet ook georganiseerd worden. Een keurmerk is makkelijk in te richten. Maar als je verder wilt gaan dan dat moet je toch moeilijk werk verrichten. (Leon) Chiel Hermans vertelde dat "Ik heb geen extra voordelen aan het Beter Leven kenmerk maar het is wel makkelijk dat ik ze heb want dan kan ik dat zo communiceren.</p> <p>(Gerrit) Met zijn allen, samen dingen doen. De supermarkten zijn geen bedreiging maar een toekomst en een mogelijkheid. Iedereen in de keten moet een eerlijke marge maken. De dierenbescherming zijn geldwolven. De hele keten moet naar een hoger niveau. (Jacques van Wieringen, Superunie) de consument bepaald of hij wel of niet iets koopt. Je moet in je eigen krachten geloven. Ga vertellen wat je goed doet. De consument wil weten waar voedsel vandaan komt en iedereen moet zijn steentje hieraan bijdragen. Niet achter de dierenbescherming aanlopen maar je eigen lijnen trekken. De retail wil niet per definitie Nederlands rundvlees met een Beter Leven ster.</p> <p>(Peter) een open dag met een nationale aanpak. Transparantie en ermee naar buitentreden. Laat bedrijven vertellen waar hun vlees aan geleverd en verkocht wordt.</p>
<i>Financiële consequenties</i>	-
<i>Communicatie</i>	Organiseren van een open dag voor de vleesveehouderij.
<i>Bijlage(n)</i>	Deelnemerslijst symposium

Deelnemerslijst symposium 'Nederlands Rundvlees' woensdag 3 april 2013.

1	Janet Bakker	Vakgroep LTO Vleesveehouder
2	Leon Moonen	Vakgroep LTO Vleesveehouder
3	Jos Bolk	Vakgroep LTO Vleesveehouder
4	Henk Wiersma	Vakgroep LTO Vleesveehouder
5	Ed Neerix	Vakgroep LTO Vleesveehouder
6	Ben Rankenberg	Van Hall Larenstein
7	Freelancer Nieuwe Oogst	Nieuwe Oogst
8	Jacques van Wieringen	Superunie
9	Gerrit van Zalk	Boni
10	Anita Heijdra	KDR
11	Edwin Heijdra	KDR
12	Guus Laeven	Federatie vleesveestamboeken Nederland
13	Peter Poel	Proviande / Boed d'or
14	John Janssens	Proviande / Boed d'or
15	Mark v. Roekel	Proviande / Boed d'or
16	Fons Lamers	Coop
17	Jeroen Ottenheijm	Jan Linders
18	Jan v. Bergeijk	Klankbordlid LTO Vleesveehouderij
19	Gertjan Smit	Consument
20	Adriaan van Ebergen	Bief select verwerker en slachter
21	Else Giesen	Kokreuteur
22	Frits Mandersloot (NA 12 UUR)	LTO Noord
23	Sjoerd Witteman	Groene Hart Rund
24	Fredie van Dijk	Blonde d'Aquitaine stamboek
25	Bas Bouman	Fierba
26	John v. Can	Klankbordlid LTO Vleesveehouderij
27	Frank Tillemans	Klankbordlid LTO Vleesveehouderij
28	Johan Roos	Klankbordlid LTO Vleesveehouderij
29	Koos Rooijmans	Klankbordlid LTO Vleesveehouderij
30	Chiel Hermans	Klankbordlid LTO Vleesveehouderij
31	Jan v.d. Staak	Vakgroep LTO Vleesveehouderij
32	Dirk van der Meulen	Leeuwarder Courant
33	Gertjan Smit	Consument

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⁶³ The crossed out names didregister for the symposium but did not come on the third of april 2013.

Annex 7. Press release symposium “Dutch Beef” (in Dutch)

Nederlandse vleesveesector : meer transparantie richting consument

Transparantie van de sector en het promoten van de goede kwaliteiten van de Nederlandse vleesveehouderij zijn belangrijker dan een keurmerk aan een stukje rundvlees hangen. Dat was een van de conclusie, die gisteren getrokken werd tijdens een symposium over Nederlands geproduceerd rundvlees in het Gelderse Elst.

Het symposium ‘Nederlands rundvlees’ was georganiseerd door stagiaire Ellen Daanje die in opdracht van de vakgroep LTO Vleesveehouderij onderzoek deed naar het beter vermarkten van het Nederlands geproduceerde rundvlees. Naast de vakgroep en verschillende vleesveehouders waren ook aanwezig retailers van Superunie, Boni, Vleesvee Intergratie Twente (VIT), Keten Duurzaam Rundvlees (KDR), Boef d’Or, Meat your Own en de Federatie Vleesveestamboeken Nederland.

‘Be good and tell it’ dat is volgens Guus Laeven van de Federatie Vleesveestamboeken Nederland de beste manier om het Nederlandse rundvlees bij de consument bekend te maken. “Ga niet verdedigen, maar vertel de consument waar de vleesveehouderij goed in is”, aldus de nieuwe voorzitter van de federatie.

De Nederlandse Vleesveehouderij is maar voor 57 procent zelfvoorzienend. Om aan de vraag te voldoen moet dus vlees worden geïmporteerd. Dit komt voornamelijk uit Duitsland, België, Groot Brittannië en Ierland. Toch scoren de Nederlandse veehouders beter als het gaat om dierenwelzijn. Verdoofd castreren, onthoornen, kalveren bij de koe, dieren op stro en grazende dieren in weilanden en natuurgebieden, op vrijwel alle terreinen liggen de eisen in Nederland hoger dan in andere EU-landen.

Toch wordt, zo bleek op het symposium, een kwaliteitskeurmerk zoals ‘Beter Leven’ van de Dierenbescherming niet gezien als dé oplossing voor het beter vermarkten. “Naast dierenwelzijn zijn ook andere aspecten (als milieu en natuurbehoud) belangrijk. Hier is Nederland ook goed in en dit moet we als sector samen uitdragen richting consument”, stelde Anita Heijdra van KDR. Milieuaspecten worden niet meegenomen in de beoordeling van het Beter Leven kenmerk.

Tijdens het onderzoek van Daanje kwam ook naar voren dat Nederlands rundvlees een goed imago heeft onder de consumenten. Het wordt gezien als een kwaliteitsproduct, dat bovendien gezond is en geproduceerd wordt onder goede dierenwelzijnsnormen. Ondanks dat positieve imago wordt dit vlees door Nederlandse retailers niet of amper gepromoot. Alleen kleine supermarkten als Dekamarkt, Dirk Bas en Digros en Poiesz, en verschillende slagers bieden actief Nederlands rundvlees aan.

“Laten we serieus gaan nadenken over het organiseren van open dagen met een nationale aanpak”, luidde de suggestie van Peter Lutke Veldhuis van VIT tijdens de discussie. Dan timmer je werkelijk aan de weg richting consument, vindt hij. Er lopen al besprekingen tussen de LTO-vakgroep voorzitter Leon Moonen en o.a. Anita Heijdra om zo’n evenement op te gaan zetten.

Annex 8. Published articles about the thesis and marketing research

Online

1. Plas, C. van der, Nieuwe Oogst (27 March 2013) *Goed imago Nederlands rundvlees* (Online) Available at: http://www.nieuweoogst.nu/scripts/edoris/edoris.dll?tem=LTO_TEXT_VIEW&doc_id=164871
2. Plas, C. van der, Nieuwe Oogst (4 April 2013) *Promotie rundvlees belangrijker dan keurmerk* (Online) Available at: http://www.nieuweoogst.nu/scripts/edoris/edoris.dll?tem=LTO_TEXT_VIEW&doc_id=165990
3. Linde, A.M. van der, Boerderij (4 April 2013) *Kwaliteit rundvlees belangrijker dan keurmerk* (Online) Available at: <http://www.boerderij.nl/Rundveehouderij/Nieuws/2013/4/Kwaliteit-rundvlees-belangrijker-dan-keurmerk-1219700W/>
4. LTO Nederland (4 April 2013) *Nederlandse vleesveesector: meer transparantie richting consument* (Online) Available at: <http://www.lto.nl/actueel/nieuws/10825640/>
5. Stamboek Blonde D'Aquitaine Nederland (4 april 2013) *Promoten Nederlandse Vleesveehouderij* (Online) Available at: http://www.blondestamboek.nl/nw-24952-7-3458361/nieuws/promoten_nederlandse_vleesveehouderij.html
6. AgriHolland (5 April 2013) *Transparantie vleessector en promotie kwaliteit belangrijker dan keurmerk* (Online) Available at: <http://www.agriholland.nl/nieuws/artikel.html?id=147328>
7. FoodHolland (5 April 2013) *Transparantie vleessector en promotie kwaliteit belangrijker dan keurmerk* (Online) Available at: <http://www.foodholland.nl/nieuws/artikel.html?id=147328>
8. LTO Noord (5 April 2013) *Nederlandse Vleesveesector: Meer Transparantie Richting Consument* (Online) Available at: <http://www.ltonoord.nl/nieuws/nederlandse-vleesveesector-meer-transparantie-richting-consument>
9. Vlees.nl (5 April 2013) *NL rundvlees: kwaliteit belangrijker dan keurmerk* (Online) Available at: <http://www.vlees.nl/algemeen/nieuws/bericht/nl-rundvlees-kwaliteit-belangrijker-dan-keurmerk/>
10. Vleesplus.nl (8 april 2013) *Transparantie vleessector belangrijker dan keurmerk* (Online) Available at: <http://vleesplus.nl/nieuws/2013/transparantie-vleessector-belangrijker-dan-keurmerk/>

Magazines & newspapers

11. Daanje, E. *Goed imago Nederlands rundvlees*. *Nieuwe Oogst*, 30 March 2013, p. 19.
12. Linde, A.M. van der. *Kwaliteit van rundvlees belangrijker dan keurmerk*. *Boerderij vandaag*, 5 April 2013, p. 8.
13. Meulen, D. van der. *Welzijn rundvee moet in prijs terugkomen*. *Leeuwarder Courant*, 5 April 2013, p. 11.
14. Daanje, E. *Ster in dierenwelzijn; Vleesveehouder wil eerlijke concurrentie met buitenlands rundvlees*. *Veehouderij, Nieuwe Oogst*, 6 April 2013, p. 15.

Annex 9. LTO Department of Beef Cattle

LTO Nederland provides a strong economic and social position for agricultural entrepreneurs. These entrepreneurs make important contributions to society's needs in relation to nutrition, health, welfare, space, energy, water and climate. The ambition for LTO Nederland is that the Netherlands are proud of 'its' agribusiness sector.

The three advocacy organizations in the Netherlands: LTO Noord, ZLTO and LLTB work together in the umbrella organization of LTO Nederland. They are future and community oriented and they are prominent. In their advocacy a theme based approach is initiated in 2011. These concern five different themes with several position papers. These themes include: Sustainable entrepreneurship, Environmental responsible entrepreneurship, good employment practices, knowledge and innovation and international.

LTO Nederland has a department for all sectors in the agribusiness. The Department of LTO Beef Cattle represents all producers in the beef sector. One of the position papers that is highly important in this department is 'Assurance and Certification.' This is because quality beef produced in the Netherlands is overshadowed by beef imports. This accounts for the adult quality beef sector. Other meat sectors such as veal production are an exporting sector. It is important to create a Level Playing Field for quality beef producers in the Netherlands. Certification is good to assure the production of Dutch quality beef. Other important position papers for the department are 'Animal health' concerning the adjustments within the *Ingrepenbesluit* and the position papers on 'International' that includes issues around the CAP reforms. Members of the department of LTO Beef Cattle are:

- President	Leon Moonen	LLTB
- Secretary	Janet Bakker	LTO Noord
- Members	Jos Bolk	LTO Noord
	Henk Wiersma	ZLTO
- Advisors	Christiaan Lenferink	NAJK
	Ed Neerincx	Federatie Vleesveestamboeken
	Jan v.d. Staak	Department LTO Dairy

