Beef Report 2007

Benchmarking
Farming Systems Worldwide
1.1 Beef Report 2007 - Foreword from the editor

World beef developments in 2007

The overall prospects for beef were positive in 2007. Global beef production in 2007 is expected to increase gradually. Global beef prices continued to rise. Global beef exports rose slowly after reduced incidence of animal diseases, growing demand in developing countries and lifting of trade restrictions. On the other hand, rising feed prices, driven by expansion of bio-energy and overall demand, contribute to lower profitability but also to higher meat prices.

The question of producing food or energy will be crucial in many countries. Qualified expert knowledge and quantified and comparable information on the international level are going to be essential to address these issues.

In light of these developments, it is my great pleasure to introduce the Beef Report 2007, the fifth issue since our start in 2002.

agri benchmark developments in 2007

The 2007 agri benchmark season was another successful year with the following main outcomes:

— New countries and partners joined from Australia, South Africa and India, the latter not yet with farm data.

— The Beef Conference 2007 was successfully held in Braunschweig with participation from 18 countries. This year’s invited speaker came from McDonald’s Europe, providing an insight view into their beef supply chain.

— The strategic partnership between the FAL and the German Agricultural Society (DLG) is fully operational.

— The new website www.agribenchmark.org has been successfully launched, is highly frequented and will host more and more attractive information for the public and agri benchmark partners.

Activities scheduled for 2008

The 2008 agri benchmark season is going to be another exciting exercise. The main following topics and changes are on the agenda:

— Emission benchmark – farm level data to be extended by information on emissions per kg carcass weight or live weight produced.

— Quarterly price information – website to be amended by information about quarterly beef and livestock prices.

— Trade profiles – analysis of export destinations and import origins by type of product to be continued.

— Beef Conference 2008 – to be held outside Germany for the first time.

— Bio-energy and beef production – a Phd-study was started to investigate the issue comparing the U.S. and Germany.

Invitation to join our network

We now have 17 countries included in the Beef Report. Canada, USA, Brazil, Argentina, Australia, South Africa, India and China represent important producers and traders on the world market. Ten further countries are located in the EU-25. These countries represent more than 80 percent of the EU beef production.

Further countries are most welcome to participate. Participation is available with low input at high quality and quantity output.

Claus Deblitz
agri benchmark Beef Network

Acknowledgements

I would like to express my sincere thanks to everyone who made a contribution to the Beef Report 2007 and the related activities. A special thanks goes to the scientific partners in their countries who managed to provide an important contribution with regard to content and funding to the network, complementing the investment made by the coordination centre FAL/DLG.
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1.3 Participants

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Africa

Special contributions
1.4 Conceptual background information

Introduction

This section provides a basic description of concepts and methods used by agribenchmark. For details please refer to our website and to the chapters of the Beef Report quoted hereafter.

Beef finishing and cow-calf

We compare both beef finishing (Chapter 2) and cow-calf (suckler-cow) production systems (Chapter 3). The data base consists of typical farms. For more details, see below and on our website.

The cow-calf enterprise starts with the birth of the calf and ends with the day of weaning. The output of the cow-calf enterprise is measured in total live weight sold and comprises weaner calves and adult animals for finishing, cull animals and breeding animals.

The beef finishing enterprise (also called beef enterprise) starts — when dairy or weaner calves or feeder cattle (backgrounder, stores) are bought from outside the farm,
— when dairy or weaner calves or adult animals are transferred from the dairy or cow-calf enterprise to the beef finishing enterprise in the same farm.

The output of the beef finishing enterprise is measured in carcass weight sold and comprises all animals which are exclusively reared for slaughter: bulls, steers, heifers, calves or cows. It does not include cull animals from a dairy or a cow-calf enterprise on the same farm.

Which animal categories are compared in the beef finishing comparison?

The following types of animals are compared:

(a) Animals finished for meat export, animals which can potentially be exported in the future or animals from which the meat is a domestic substitute for beef imports from other countries.

(b) Final products, i.e., finished animals that go to slaughter.

(c) Heavy male animals (bulls or steers), as these categories can be better compared than males with females or even with calves. One Spanish farm is an exception (see Table 2.2.2).

In the future, with more farms and more production systems, subgroups could be formed for a comparison of specific meat products like heifer meat (see also Chapter 4.4).

How do we define a typical farm?

A typical farm is defined as
— being an existing farm or a data set describing a farm,
— being in a specific region which represents a major share of output for the product considered,
— running the prevailing production system for the product considered,
— reflecting the prevailing combination of enterprises as well as land and capital resources,
— as well as the prevailing type of labour organisation.

The typical farms are never averages of survey data because averages do not provide consistent production system data sets. They are the result of a panel meeting with four - six farmers and an advisor where each figure is obtained in a consensus or they are based on individual farms which were ‘typified’ by replacing farm individual particularities by prevailing characteristics, figures, technologies and procedures.

How is the typical farm data collected?

A Standard Operating Procedure (SOP) exists to define typical farms in different countries and regions. Basically, the following procedure is applied:
— Select regions and locations
— Identify the prevailing production systems
— Identify the relevant farm population
— Define the size and management level of the typical farms
— Collect, cross-check and update data

Farm data are always collected on whole farm level and overhead costs are assigned (allocated) to the enterprises. A paper on the SOP as well as a description of each farm is available on our web-site.

How do we calculate cost of production?

Once data are collected they are processed with the Excel spreadsheet tools available. As data are collected on the whole farm level, they are broken down to enterprise and animal level when performing a unit cost analysis (for example cost per kilogram beef produced).

Details on our procedure to assign (allocate) costs from whole farm level to the enterprises, and from the enterprise level to groups of animals are described in Annex 3.
1.5 Maps with countries and typical farms

Europe (Legend see bottom of next page)

- **United Kingdom**: 35/40 —/60 90 98
- **Germany**: 230 260 280 800/1400 —/1000 525T
- **Sweden**: 140/150 230T
- **Poland**: 12 30
- **Hungary**: —/150T —/880T
- **Spain**: 630/160 940 6790 —/90
- **France**: 45/65 70/80 90A 90B —/85
- **Italy**: 910 2880T
- **Austria**: 25F/30 —/25C 35 120 150T
- **Hungary**: —/150T —/880T
- **Poland**: 12 30

Asia

- **China**: 300 940 —/2

Australia

- **Australia**: 27K —/540 —/1900

(Seifert, 2006)
1.5 Maps with countries and typical farms

North America

Alberta (CA)
9600 feedlot
170 cows

Montana (USA)
500 cows

New Mexico (USA)
240 cows

Kansas (USA)
7200 feedlot

South America

Mato Grosso (BR)
140/400
340/1070

Argentina
800
2200
—/730
—/1300

Mato Grosso
do Sul (BR)
240
600

Africa

South
Africa
75K
—/200
—/250
—/300

Legend

The first (or only) number indicates the total number of cattle sold per year, the second (or only) number the total number of suckler-cows. The suffixes 'F' and 'C' behind the numbers indicate the finishing (F) and the cow-calf (C) enterprises if cattle numbers in finishing and cow-calf farms of one country are the same. The suffix 'T' means this farm is classified as a top management farm according to the Standard Operating Procedure (see Chapter 1.4).

Examples:

'230' in Germany the farm sells 230 animals per year
'45/65' in France the farm sells 45 finished cattle per year, it keeps 65 suckler-cows
'—/90' in Spain the farm sells no finished cattle, it keeps 90 suckler-cows
'25F/30' and '—/25C in Austria the first farm sells 25 finished cattle and keeps 30 suckler-cows, the second farm keeps 25 suckler-cows
2

Comparison of typical beef finishing farms in 2006

2.1 Summary beef finishing
2.2 Overview of the beef finishing farms
2.3 Production systems and physical indicators
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2.9 Profitability of the beef finishing enterprise
2.10 Whole farm figures
## 2.3 Production systems and physical indicators

<table>
<thead>
<tr>
<th>Farm name</th>
<th>Size (Ha)</th>
<th>Management (A)</th>
<th>Age at start (days)</th>
<th>Weight at start (kg LW)</th>
<th>Daily weight gain (g / day)</th>
<th>Final weight (kg LW)</th>
<th>Dressing percentage (°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-25F</td>
<td>L / A / I</td>
<td>12 bulls, 12 heifers Maize + grass silage, + grains + hay</td>
<td>275 228 503</td>
<td>400 1311 699</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT-35</td>
<td>L / A / I</td>
<td>35 bulls Maize + grass silage + grains, soybean, hay</td>
<td>50 490 540</td>
<td>98 1253 712</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT-120</td>
<td>L / A / I</td>
<td>120 bulls Maize + grass silage + grains, soybean, hay</td>
<td>50 457 507</td>
<td>97 1315 698</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT-150T</td>
<td>L / T / I</td>
<td>150 bulls Maize slage + grains, rapeseed meal</td>
<td>40 453 493</td>
<td>91 1551 703</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE-250</td>
<td>L / A / P</td>
<td>228 bulls Maize silage + grains</td>
<td>50 483 533</td>
<td>81 1265 692</td>
<td>57</td>
<td></td>
<td></td>
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<tr>
<td>DE-360</td>
<td>L / A / P</td>
<td>263 live steers Maize silage + concentrates</td>
<td>14 273 287</td>
<td>47 1227 382</td>
<td>52</td>
<td></td>
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<tr>
<td>DE-800</td>
<td>L / A / P</td>
<td>280 bulls Maize silage + concentrates</td>
<td>60 514 574</td>
<td>87 1154 680</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE-600</td>
<td>L / A / I</td>
<td>671 bulls, 132 heifers Maize &amp; grass silage + grains</td>
<td>260 266 526</td>
<td>280 1203 600</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE-225T</td>
<td>L / I / T</td>
<td>525 bulls Maize silage, concentrates, by-products</td>
<td>137 427 564</td>
<td>188 1251 722</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR-65</td>
<td>L / A / P</td>
<td>30 bulls, 15 cows Maize + grains + soybean, hay</td>
<td>220 289 509</td>
<td>263 1426 695</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR-70</td>
<td>L / A / P</td>
<td>37 bulls, 22 heifers, 14 cows Maize silage + grains, soybean, hay</td>
<td>252 220 472</td>
<td>320 1273 600</td>
<td>62</td>
<td></td>
<td></td>
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<tr>
<td>FR-90A</td>
<td>L / I / P</td>
<td>90 bulls Maize silage + grains</td>
<td>274 310 - 315</td>
<td>285 1230 - 1349</td>
<td>67 - 710</td>
<td>58-63</td>
<td></td>
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<tr>
<td>FR-90B</td>
<td>L / I / P</td>
<td>90 bulls Maize silage + grains</td>
<td>7 547 - 557</td>
<td>65 1170 - 1132</td>
<td>667 - 685</td>
<td>54-56</td>
<td></td>
</tr>
<tr>
<td>ES-620</td>
<td>L / A / I</td>
<td>242 heifers, 291 bulls, 98 cows Straw + concentrates + grains</td>
<td>195 215 410</td>
<td>260 1448 580</td>
<td>57</td>
<td></td>
<td></td>
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<tr>
<td>ES-940</td>
<td>L / A / P</td>
<td>942 heifers Straw + concentrates + grains</td>
<td>180 165 345</td>
<td>250 1272 450</td>
<td>54</td>
<td></td>
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<tr>
<td>ES-6790</td>
<td>L / A / P</td>
<td>6791 bulls Straw + concentrates + grains</td>
<td>20 284 - 304</td>
<td>70 94 1243 - 1480</td>
<td>448 - 511</td>
<td>53-56</td>
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<tr>
<td>IT-910</td>
<td>L / A / I</td>
<td>910 bulls Maize silage + grains + concentrates, straw</td>
<td>330 208 538</td>
<td>412 1466 717</td>
<td>60-61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT-2860T</td>
<td>L / T / I</td>
<td>2,844 bulls Maize silage + concentrates</td>
<td>355 175 530</td>
<td>452 1520 718</td>
<td>60-61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-140</td>
<td>L / A / P</td>
<td>166 steers Pasture + grass silage + concentrates</td>
<td>590 352 940</td>
<td>475 643 700</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-210T</td>
<td>L / A / P</td>
<td>123 heifers, 114 calves Pasture, grass silage + concentrates</td>
<td>200 293 493</td>
<td>300 1232 661</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PL-12</td>
<td>L / A / I</td>
<td>7 bulls, 5 heifers Grass silage + concentrates</td>
<td>15 535 550</td>
<td>60 860 520</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PL-30</td>
<td>L / A / I</td>
<td>21 bulls, 9 heifers Maize + grass silage + grains, concentrates</td>
<td>15 535 550</td>
<td>60 879 530</td>
<td>49-54</td>
<td></td>
<td></td>
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<tr>
<td>CA-6600</td>
<td>L / A / P</td>
<td>6,362 steers, 3,160 heifers Feed barley grain + barley silage</td>
<td>310 150 460</td>
<td>380 1500 605</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US-7200</td>
<td>L / A / P</td>
<td>7,505 steers Grain silage + peas, alfalfa hay</td>
<td>265 191 456</td>
<td>303 1444 578</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AR-800</td>
<td>L / A / P</td>
<td>800 steers Pasture + maize silage + corn</td>
<td>310 558 768</td>
<td>175 495 451</td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AR-9200</td>
<td>L / A / P</td>
<td>1,605 steers, 559 heifers Pasture + hay + maize silage</td>
<td>123 - 169 576 - 684</td>
<td>745 - 807</td>
<td>125 - 140 436 - 491</td>
<td>423</td>
<td>58</td>
</tr>
<tr>
<td>BR-140</td>
<td>L / A / P</td>
<td>144 steers Pasture</td>
<td>244 735 974</td>
<td>200 397 490</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-240</td>
<td>L / A / P</td>
<td>245 steers Pasture</td>
<td>212 730 942</td>
<td>180 452 510</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-340</td>
<td>L / A / P</td>
<td>343 steers Pasture</td>
<td>244 730 974</td>
<td>200 404 495</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-400</td>
<td>L / A / P</td>
<td>600 steers Pasture</td>
<td>244 854 1098</td>
<td>190 363 500</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CN-300</td>
<td>L / A / I</td>
<td>300 bulls Maize silage + wheat straw</td>
<td>210 120 330</td>
<td>270 1235 420</td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CN-940</td>
<td>L / A / P</td>
<td>640 bulls, 294 cows Maize slage, corn, cotton seed, hay</td>
<td>540 180 720</td>
<td>400 944 570</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU-27K</td>
<td>L / A / I</td>
<td>24,010 steers, 3,000 heifers Grain + maize silage</td>
<td>420 - 540</td>
<td>367 - 440</td>
<td>1635 - 1900</td>
<td>528 - 685</td>
<td>53-55</td>
</tr>
<tr>
<td>ZA-75K</td>
<td>L / A / I</td>
<td>45,000 steers, 30,000 heifers Corn, hay + concentrates</td>
<td>210 115 325</td>
<td>210 1652 420</td>
<td>58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Figures in the table are for the male cattle only; exceptions: ES-940 (exclusively heifer production)

(1) Number of total (bulls + cows) sold per year
(2) Size (average, 30,000 heifers)
2.9 Profitability of the beef finishing enterprise

2.9.1 Total returns, costs and profitability by cash and non-cash costs (US$ per 100 kg carcass weight)

2.9.2 Short and medium-term profitability (US$ per 100 kg carcass weight)

2.9.3 Price changes required for break even (Factor of original price)
### Comparison of typical cow-calf farms in 2006

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3.5 Total returns of the cow-calf enterprise

3.5.1 Composition of total live weight sold (kg live weight sold per cow and year)

3.5.2 Total returns (US$ per 100 kg live weight sold)

3.5.3 Total returns (percentage composition)
3.8 Profitability of the cow-calf enterprise

3.8.1 Total returns and costs by cash and non-cash costs (US$ per 100 kg live weight sold)

3.8.2 Short- and medium-term profitability (US$ per 100 kg live weight sold)

3.8.3 Total return changes required for break even (Factor of original returns)
4 Tools and additional analysis

4.1 Tools
4.2 Tools – Trade profiles
4.3 Figures related to weight added
4.4 Grouping of farms by production systems and breeds
4.5 Classification of farms
4.6 Time series analysis
4.7 Decoupled payments in the European Union
4.8 Analysing farms with a complete cycle of cow-calf and finishing
4.1 Tools

Introduction

This chapter is to highlight tools for additional analysis as well as results provided to scientific partners, branch partners, and sponsors. Access to these items is via the member section of our website. Most of the tools are in Excel and/or Power Point format.

The focus in this chapter is on two new tools developed in the 2007 season, whereas existing tools are briefly summarised. Details on the existing tools are provided in Chapter 4 of the Beef Report 2006 (see also the free download of the Beef Report 2006 extract on www.agribenchmark.org).

Benchmark tool

The benchmark tool is based on the Result Data Base. It enables the user to select any set of variables from the Result Data Base and run a direct comparison of these variables between a user defined set of farms. There are different ways to select farms:

— One farm vs. one farm
— One farm vs. \( n \) farms (\( n \) comparisons)
— One farm vs. average of \( n \) farms
— Average of \( n \) farms vs. average of \( n \) farms

Differences between the farms compared are expressed in relative terms. Example: Total returns for one farm are US$ 100,000 and for a second farm are US$ 120,000. A factor of 1.2 is displayed indicating that the returns of the second farm are 1.2 times higher than the returns of the first farm.

When comparing more than one farm, a factor is calculated for each single comparison and for each variable selected. Out of this, an average factor as well as a minimum and maximum factor is displayed.

Trade profiles

Figures on quantities and values of beef and beef products traded world-wide are an excellent addition to the farm level analysis. A tool was developed to easily display trade relations between different countries in charts and tables. For details on the tool see Chapter 4.2.

Time series of typical farms

With the ongoing annual analysis, a time series of farm data is accumulated. A tool was developed to analyse developments and differences of data between years for identical farms. For details on the tool and for results see Chapter 4.6.

Result Data Base (RDB)

The Result Data Base (RDB) for beef finishing and cow-calf production systems is the core result of the farm comparison activity and provides the data basis for further analysis tools. In the 2007 exercise, the RDB comprises almost 400 variables for beef finishing and more than 350 variables for cow-calf for each farm. Each of the two RDBs reveals the following features:

— A comprehensive set of physical and economic data on enterprise and whole farm level.
— A set of approximately 75 standard charts illustrating the data (see charts in Chapters 2 and 3).
— A tool to create individual charts for each variable from the data set.
— Options to switch to per head reference units.
— Options to display values and charts in different currencies and languages.
— A tool to rank farms by different variables (from low to high) and to correlate variables.
— A table classifying the farms based on selected variables and on user-defined quantiles.

Beef and livestock price time series

Price time series data start in 1996 and are updated annually. With an easy-to-handle tool, charts with price time series for the countries selected can be generated in both national currencies and in US$-terms. Beginning with the 2008 season, beef and livestock prices will be available from the agri benchmark website. Updates are planned on a quarterly basis.

World, regional and country maps

Numerous maps are available to generate a worldwide overview of the beef sector in an easily accessible way. The maps are mainly related to production, trade as well as to policy, and comprise status quo analysis, changes over time and projections into the future. Most of the maps are provided in animated Power Point slides to be integrated into own presentations.

Farm simulation reflecting risk

The model environment used within the agri benchmark allows the projection of farm data sets for a period of 10 years into the future. Analysis can be done in a deterministic mode as well as in a stochastic mode using the SIMETAR© Excel add-in developed at Texas A&M University. The stochastic mode allows the inclusion of production, weather and market risk in policy and farm strategy analysis.
4.2 Tools – Trade profiles

Introduction

Trade of beef is undergoing dynamic changes, driven by market developments as well as by disease-related trade restrictions. Since agri benchmark is a global project, it was always found to be useful to add trade information to the farm analysis and relate it to our own findings on the farm-level.

Source and characteristics of the trade data

The UNComtrade database with a world-wide coverage, (http://comtrade.un.org), was used to analyse trade flows. The data display the following characteristics:

— Differentiation into seven beef product groups (see Figure 4.2.1).
— Bilateral trade figures between any country selected from the data base.
— Figures in quantities (kg) and values (US$).
— Figures for exports, imports and re-exports.

Own tools were developed to efficiently analyse the raw data obtained from the data base and to transform them into useful output formats.

Presentation of results

The output is created by an Excel-tool and displayed in three different types of charts and data:

1. For a user-defined time-series, top 5 export destinations and import origins (quantities and values) for the sum of the beef products (Figures 4.2.2a, b and 4.2.3).
2. For a user-defined time-series, export and import quantities and values, broken down by user-defined groups of the beef products (Figure 4.2.4).
3. For one selected year, top 5 export destinations and import origins (quantity and value), broken down by user-defined groups of beef products (Figure 4.2.5).

The tool shows all values mentioned above in absolute terms and in percentage composition.

Examples

All examples show absolute quantities of beef trade, i.e., values (US$) and percentages are not shown here.

Argentina: A sharp drop can be observed due to FMD in 2001, recovering in the period 2002 to 2005 when exports increased 2.5 times. Brazil vanished as an important export destination. In 2005, only about 60 percent of total exports can be explained by the Top 5 export destinations. The top 5 countries in 2005 were Russia, Chile, Germany, Italy and Israel.

Japan depends on very few suppliers from North America and Oceania, mainly due to hygiene and disease restrictions. Thus, the BSE-related drop out of the U.S. supply lead to significantly reduced beef imports which could not be compensated by the higher imports from Australia and New Zealand.

USA: Beef exports dropped 80 percent in 2004 coming from a very high level in 2003 due to the detection of one BSE case in late 2003. Main exports consist of fresh and frozen meat as well as frozen offals and meat preparations.

Australia: The two main export products are fresh and frozen meat. Fresh meat is clearly dominated by Japan, mainly consisting of high value cuts. Frozen meat exports are led by the U.S. and mainly consist of minced meat for hamburgers. Offals play a minor role, are more diversified and also directed to other locations like Indonesia and Russia.

4.2.1 List of products analysed (UNComtrade HS 1992)

<table>
<thead>
<tr>
<th>No.</th>
<th>Codes</th>
<th>Group</th>
<th>Subgroup (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>201</td>
<td>Meat of bovine animals, fresh or chilled</td>
<td>20110 Carcasses/half-carcasses of bovine animals, fresh/chilled</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20120 Meat of bovine animals, fresh/chilled (excl. 020110), bone-in</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20130 Meat of bovine animals, fresh/chilled, boneless</td>
</tr>
<tr>
<td>2.</td>
<td>202</td>
<td>Meat of bovine animals, frozen</td>
<td>20210 Carcasses/half-carcasses of bovine animals, frozen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20220 Meat of bovine animals, frozen (excl. of 020210), bone-in</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20230 Meat of bovine animals, frozen, boneless</td>
</tr>
<tr>
<td>3.</td>
<td>20610</td>
<td>Edible offal of bovine animals, fresh/chilled</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>20621</td>
<td>Tongues of bovine animals, frozen</td>
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</tr>
<tr>
<td>5.</td>
<td>20622</td>
<td>Livers of bovine animals, frozen</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>20629</td>
<td>Edible offal of bovine animals (excl. tongues &amp; livers), frozen</td>
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</tr>
<tr>
<td>7.</td>
<td>21020</td>
<td>Meat of bovine animals, salted/in brine/dried/smoked</td>
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</tr>
</tbody>
</table>

In Figure 4.1.4 and 4.1.5 these items are summarised into ‘Other offals and meat preparations’.
4.2 Tools – Trade profiles

### 4.2.2a Argentina: top 5 export destinations - table

<table>
<thead>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>251</td>
<td>245</td>
<td>142</td>
<td>198</td>
<td>196</td>
<td>65</td>
<td>188</td>
<td>219</td>
<td>385</td>
<td>498</td>
</tr>
</tbody>
</table>

### 4.2.2b Argentina: top 5 export destinations

#### 4.2.3 Japan: top 5 import origins

#### 4.2.4 USA: composition of exports

#### 4.2.5 Australia: export destination by product
4.6 Time series analysis

Introduction

With the new time series tool developed, an analysis comparing the results for the years 2006 and 2005 for identical farms was performed. A total of 32 farms out of the beef finishing sample of 38 farms could be analysed. The tool is also available for cow-calf.

Method

Using the annual Result Data Bases, time series analysis for identical farms can be performed with a newly developed tool. The tool basically selects any farm and variable from the RDB and displays results in tables and charts. Data from upcoming years can be easily added to the tool, thereby increasing the time series.

Relatively few changes between years

Figure 4.6.1 shows the total returns and their differences between 2006 and 2005. Total returns went up for most of the farms. Particularities are:

- The decoupling of payments in France and Spain lead to significantly reduced returns.
- In Argentina the decrease in returns was a combined national and exchange rate effect.
- Changes are no more than US$ 60 per 100 kg carcass weight, equivalent to ±10 percent.

Figure 4.6.2 differentiates the difference shown in Figure 4.6.1 into an exchange rate impact and a national price and/or productivity impact:

- Most of the changes are a result of national changes in returns as the devaluation of the US$ against other currencies in 2006 was relatively small compared with the years before.
- The positive national changes are due to beef price increases, the negative national changes in France and Spain are due to the decoupling of the payments (not appearing anymore in the beef enterprise) and in Argentina and Brazil due to beef price decreases.
- The changes in the small Austrian and the large German farm are due to changes in the data structure.
- Argentina was the only country with a devaluation of its currency against the US$.

Changes in cost of production were similar to those in returns. Particular cases are:

- Rises in purchase feed costs are the main reason for the high cost increase in the DE-260.
- FR-90B: Poultry returns went up significantly. Thus, the return share of beef and the associated cost went down, but less than five percent.
- Spain: Calves and feed were the main cost drivers. A special case is the ES-6790 where due to the specific legal construction of the farm (investor model with paid barns and labour in different locations) a transfer of the formerly coupled direct payments from the investor to the farmers appeared in the variable cost which is no longer relevant after decoupling.
- Sweden: Main drivers were livestock prices, feed and energy.

4.6.1 Total returns of identical beef finishing farms in 2005 and 2006 (US$ per 100 kg carcass weight)
4.6.2 Differentiation of return difference 2006 vs. 2005 into exchange rate and national impact (US$ per 100 kg carcass weight)

4.6.3 Total cost of identical beef finishing farms in 2005 and 2006 (US$ per 100 kg carcass weight)

4.6.4 Differentiation of cost difference 2006 vs. 2005 into exchange rate and national impact (US$ per 100 kg carcass weight)