agri benchmark

Beef Report 2008

Benchmarking
Farming Systems Worldwide

1.1 Beef Report 2008 – Foreword from the editor

World beef situation

Grain and energy **prices**, at **record high** levels as a result of **high demand**, **low stocks**, low harvests due to climatic extremes as well as the use of land for producing **bio-energy** crops, were (again) the drivers of world agriculture in 2007/2008. Commencing food shortages in developing countries highlight the severity of the new situation. The climate change discussion and related **emission** trading schemes are further issues which are related with most of those previously mentioned.

In this context, world **beef prices** were further on the rise in 2008 and are now approximately 50 percent above the 2002 level. At the same time, **livestock price rises** were in a similar range in most countries. 2008 (and most likely 2009) was a specifically tough year for producers, like feedlots, depending on purchased grains, concentrates and minerals. **High commodity prices** will directly and indirectly drive land prices up, thus affecting all land use systems including grassland.

All this will drive beef (and livestock) prices up further and beef production at least partially more towards grassland. Further, a more intense discussion on the environmental and health implications of beef production and consumption can be expected, covering emissions and related carbon trading schemes, water use, feed conversion, nutrient cycles and red meat consumption. This is why the network has started its own work on emissions.

Chapter 2 is fully dedicated to providing more insight into the present situation of beef production, markets and trade in the world and countries participating in ***agri benchmark***.

agri benchmark developments in 2008

The highlights of the 2007/2008 season were:

- The network continued to expand and consolidate at the same time. New **countries** in 2008 are Colombia, Indonesia, Norway and Peru. Data and methods were **improved**, understanding **enhanced** and professional and personal relationships **matured**.
- For the first time since the founding of the network, the Beef Conference was held outside Germany, in the Brazilian capital **Brasilia**. What started as an experiment, turned out to be a complete success (see acknowledgements).
- The duration of the **Beef Conference**, as well as its format, were changed into 4 days, consisting of 2 days of workshops, 1 full day excursion and 1 day public conference with invited speakers and public attendance. The conference schedule is available on the website at *http://www.agribenchmark.org/162.html*. It was agreed to maintain this format for the next years.
- **Emissions** from enteric fermentation, manure storage and management as well as feed production were calculated and related to 100 kg of beef produced. The preliminary results for selected countries and production systems encouraged us to continue and deepen this kind of work.
- Existing **tools** to further analyse the results were improved and new tools were developed. The sensitivity analysis tool is an example (see Chapter 5.2). This year's training session saw 22 participants who specifically practised the use of our tools to further analyse the results we produce.
- The website is permanently updated and now hosts a data base of **price time series** for beef, calf and weaner prices.

Acknowledgements

Our biggest thank you is to our Brazilian partners, representing **CNA** and **CEPEA** (see partner list). They managed to organise a fantastic conference and made us feel home at the same time. This was only possible due to the great time and financial inputs from our partners and the sponsorship from the Brazilian National Beef Cattle Forum.

My further thanks go to all our **partners** who do not just provide data and knowledge but also funding to keep the business going. You are the heart of the project.

*My experience as a first time attendee was extremely positive and the contacts I have made will be very useful in the future. The vision of **agri benchmark** and the commitment to build this network to where it is today is very much appreciated.*
Lloyd Davies, Australia

I would like to say that we had a very nice time. The opportunity to exchange information, knowledge, experiences was really positive. This last meeting was a result of a long-term investment.
Sergio de Zen, Brazil

As new members all of you made us feel very welcome and we learned a lot. The meat during the 'braai' (barbecue) was great (as was all the other activities and food) and it was nice to taste so many different types of meat. We look forward to build this relationship in future.
Andre Jooste and Pieter Taljaard, South Africa

1.1 Beef Report 2008 - Foreword from the editor

Scheduled activities for 2009

The most important activities and highlights for the upcoming season are:

- The success of moving the Conference out of Germany encouraged us to have the Beef Conference 2009 in Limoges, the capital of the Limousin region in **France**, with the last (public) day of the Conference and the post-conference tour in Paris. The Conference will be jointly organised by the French Livestock Institute (Institut de l'Élevage) and the ***agri benchmark*** Centre.
- It was decided to expand the **emission** analysis to more countries and farms, to improve the manure and feed production analysis, as well as to reflect the **carbon sequestration** potential of grassland.
- As calf and weaner prices create the link within the beef sector, it was decided to **integrate** the analysis of the **cow-calf** and **beef finishing** enterprises for both the economic and the emission analysis.
- From farm gate to the consumer: **beef supply chain** analysis in Indonesia (within a beef supply chain project in Eastern Indonesia) and the Southern Africa region.
- The **price time series** on the website will be updated on a **quarterly** basis and provided to the public.
- In some countries, initiatives to establish **national / regional** networks of typical farms will be started to improve the national / regional data base and obtain more representative information. Examples are South Africa, Indonesia and Scandinavia.
- Together with the Spanish partners from TRAGSEGA, and the financial support from the Spanish Ministry of Agriculture, the model environment was extended with a **sheep module** (ewe and lamb finishing). The analysis tools now cover beef finishing, cow-calf, forage and cash crop, sheep and dairy in one single model environment. The steps to establish a world-wide sheep network are presently discussed between the partners.

It was a very interesting and enjoyable week and I'm already looking forward to next year's conference. I look forward to working with you all in the future.
Mark Topliff, UK

I want to express my satisfaction about the training and the conference. It was not only a professionally most interesting experience but a very enjoyable week thanks to all of you.
Cristina Ras, Argentina

Conclusions

The feedback to our work indicates that we are doing **relevant** things and are heading towards the right direction. In times of rapid changes and associated challenges, the world increasingly needs the type of information and knowledge we produce. I am looking forward to sharing another year of common activities, learning experiences, developments and challenges in this unique network and with a group of fascinating people. **Let's keep the ball rolling.**

Claus Deblitz

Coordinator ***agri benchmark*** Beef

This conference has extended my experience and information has been useful for me as an agricultural economist and for my own research centre.
Prajogo Hadi, Indonesia

It is a great pleasure to meet you all there and it is extremely beneficial from my side to share your ideas about the global situation of the beef industry.
Dong Wang, China

I think the Beef Conference is, as always, a unique opportunity to share information, methodologies and conceptual issues related with beef production and economics in a world wide sense.
Ernesto Reyes, Spain

1.2 Table of contents

1.2 Table of contents

1.3 Partners

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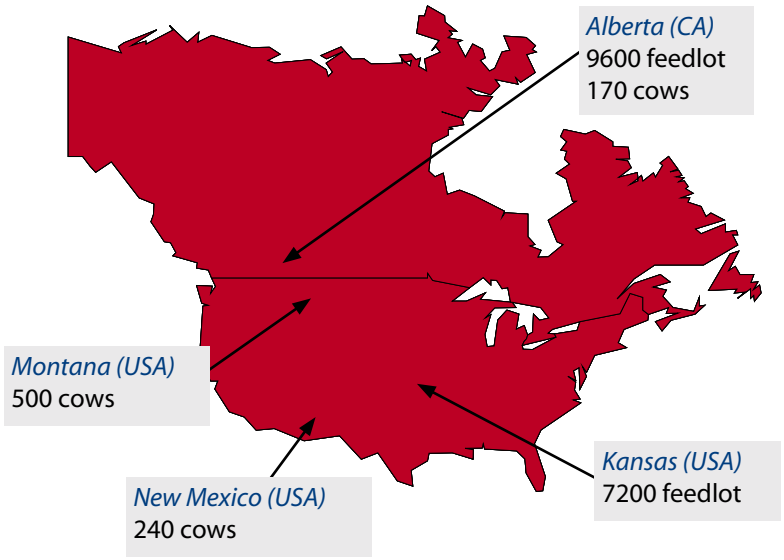
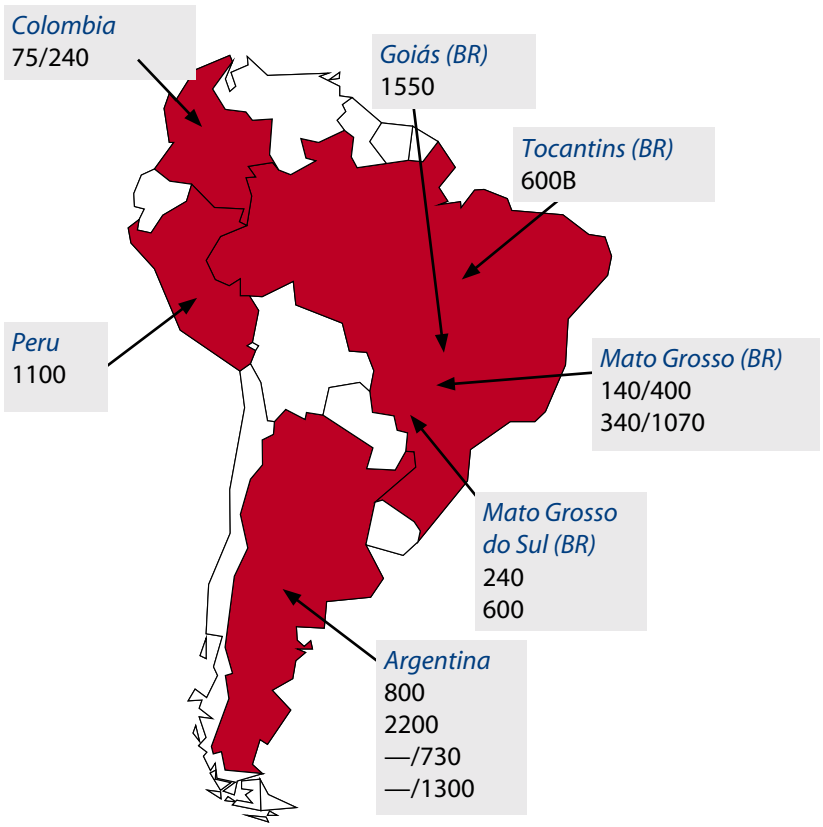


South America



Legend

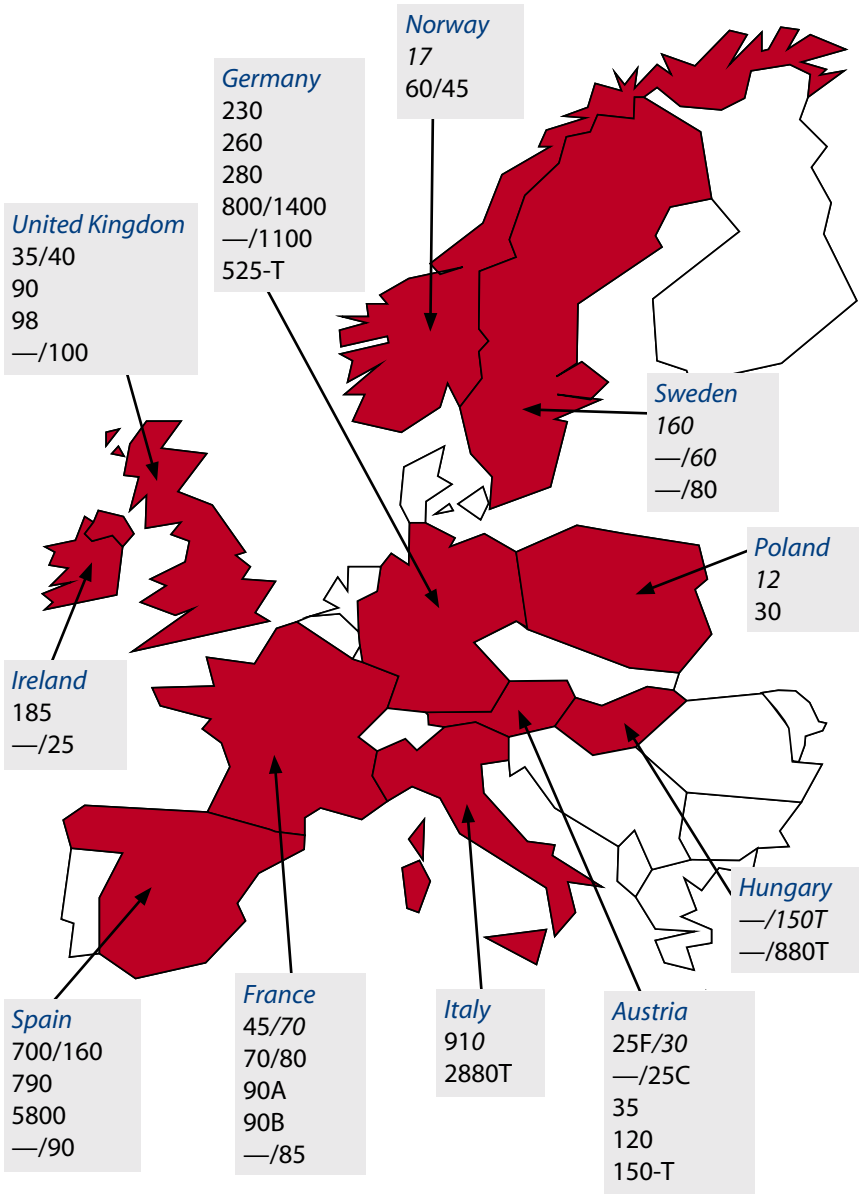
The first (or only) number indicates the total number of cattle sold per year, the second (or only) number the total number of suckler-cows. The suffixes 'F' and 'C' behind the numbers indicate the finishing (F) and the cow-calf (C) enterprises if cattle numbers in finishing and cow-calf farms of one 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:

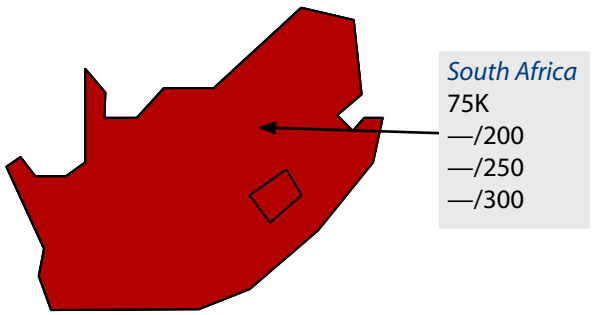
'1100' in Peru	the farm sells 1100 animals per year
'75/240' in Colombia	the farm sells 75 finished cattle per year, it keeps 240 suckler-cows
'—/730' in Argentina	the farm sells no finished cattle, it keeps 730 suckler-cows

1.4 Maps of typical farms

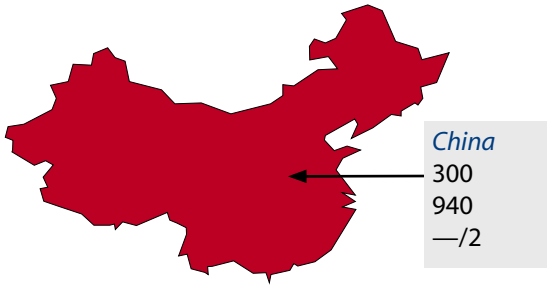
Europe

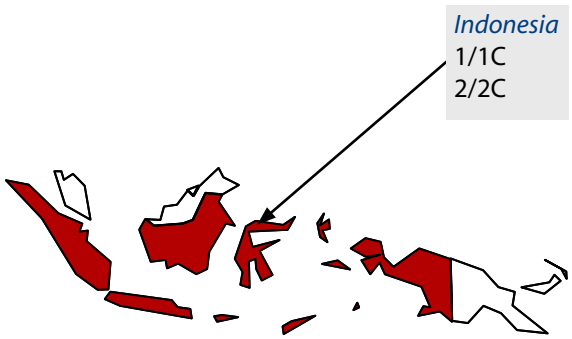


South Africa



Asia





Australia

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
'45/70' 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

1.5 Conceptual background information

Introduction

This section provides a basic description of concepts and methods used by ***agri benchmark***. 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 3) and cow-calf (suckler-cow) production systems (Chapter 4). 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, cull animals and breeding animals.

The **beef finishing** enterprise (also called finishing 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 usually constitute the majority of finished cattle and can be better compared than males with females or even with calves.

In the future, with more farms and more production systems, **subgroups** could be formed for a comparison of specific meat products like heifer meat.

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. Typical farms are the result of a **panel** meeting with 4-6 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 website.

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 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)** cost from whole farm level to the enterprises and from the enterprise level to groups of animals are described in Annex 3.

Finishing cattle in Poland

Suckler-cow herd in France

2 World and country situation of the beef sector

Cattle grazing area in Sweden

Cattle farm in Norway

2.6 Country price developments

Introduction

The following pages show beef and livestock price developments from 1997 to 2007 for the countries participating in the ***agri benchmark*** Beef Network. Each page shows two country groups. Each country group consists of **five charts**: two charts with **national** prices of beef and livestock in the left hand side, one chart with the **exchange rate** to the US$ in the centre and two charts with the **US$-prices** for beef and livestock in the right hand side. The beef and livestock prices correspond to the animal categories analysed in the typical farms. The charts show price indices with the Index = 100 year 1996 (exceptions see in explanations below).

Parallel developments in the EU incl. Norway …

In the EU countries plus Norway a drop of **beef prices** on national level in 2001 as a result of the BSE and FMD crisis can be observed (Figures 2.6.1-2.6.3). Exceptions are Poland and Hungary who not were EU-members at that time yet (Figure 2.6.4). After that incident, prices basically went up again. Despite the increases, national (nominal) prices in 2007 were still at the same level or just 10 percent higher than in 1996. Exceptions are Italy (strong beef demand) as well as Poland and particularly Hungary, where prices shot up in 2004 – one year prior to the EU-accession – as a result of the introduction of **subsidies** and basically remained on that level.

The **exchange rate** development within the EU and Norway showed a very similar pattern to the national beef price development, i.e., reaching its lowest point in 2001 and strongly increasing since then. However, just like the beef prices, the exchange rate in most countries is just back to 1996 levels. In US$-terms, the result is a sharp decline of beef prices in 2001 and a just as sharp increase from 2002 to 2007.

As regards **livestock prices**, similar but more pronounced patterns than for the beef prices could be observed. Ireland and the UK are somehow exceptions because the BSE crisis hit these two closely linked markets earlier than mainland Europe, resulting in depressed prices.

… and similar in North America and Eastern Europe

In Figure 2.6.4, The Eastern European and the Northern American countries are displayed. They are in one group because the farm analysis in the last years showed similar price and cost levels between them.

In the U.S., both **beef** and **livestock** prices were basically on the rise for the whole period considered despite dramatic, BSE-related shifts in domestic and exported beef quantities. The strong demand for beef was the main driver and also led to increases in livestock prices due to the reduction in U.S. herd size. Beef prices in Canada remained relatively stable whereas livestock prices were more erratic, ending at the same level as in 1997. As said above, price rises for livestock in Hungary were much lower than for beef and in line with the other countries.

The **exchange rate** movements in this country group were similar to the ones in the EU with the exception of Canada which overall seems to be on a relatively higher level. As a result, the US$ price movements were very similar between the countries with the exception of the rocketing Hungarian beef price.

Dramatic movements in South America and Asia

Figure 2.6.5 holds the South American countries and Figure 2.6.6 represents Asia, South Africa and Oceania. Similar to the previous country groups, national beef and livestock prices pointed upwards in the period considered, thereby at least doubling. The only exception is Peru where both prices remained relatively stable and only rose significantly in 2007.

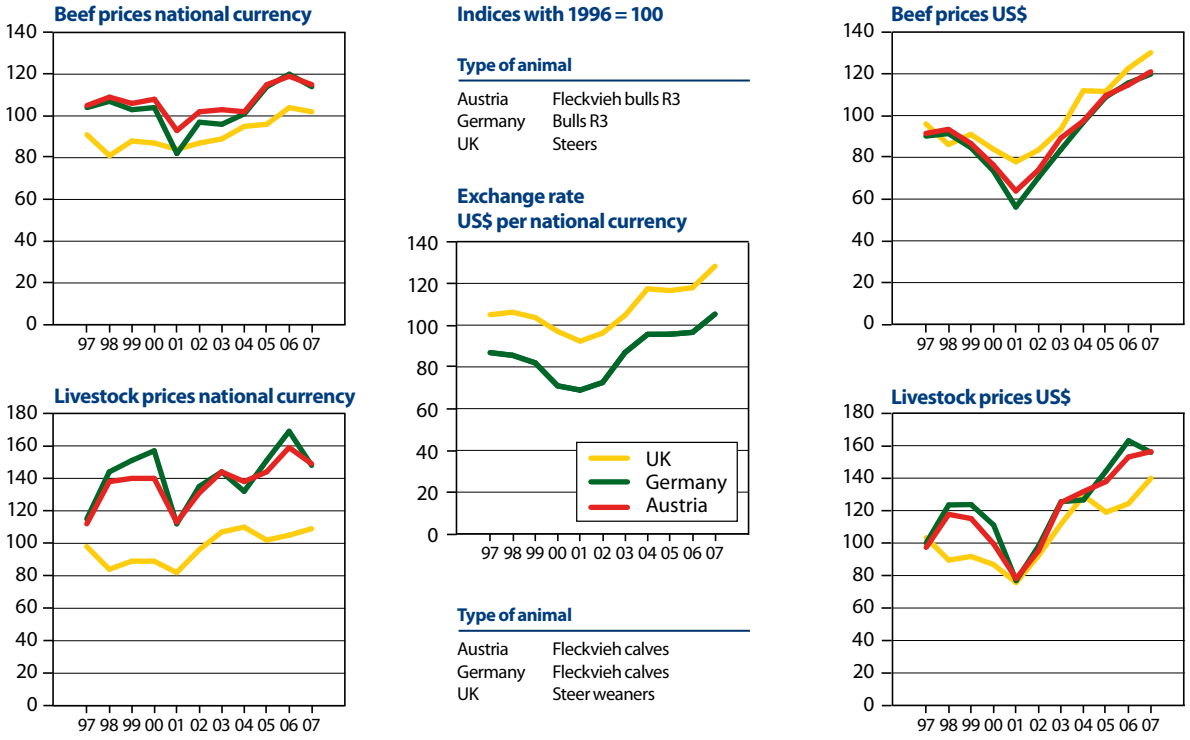
Australia (and Peru) are the only countries in this group with an **exchange rate** development similar to the EU. All other experienced dramatic devaluations of their exchanges rates. The most dramatic were Brazil (Jan 1999), Argentina (Dec 2000/ Jan 2001) and Indonesia (1998). China only recently allowed a limited movement of their currency which resulted in a slight upwards trend of the RMB against the US$.

Despite the strong devaluations in some countries, the overall price developments in **US$-terms** was **upwards** as well. The exceptions are the Indonesian and Peruvian beef prices which both stayed below the levels of 1997.

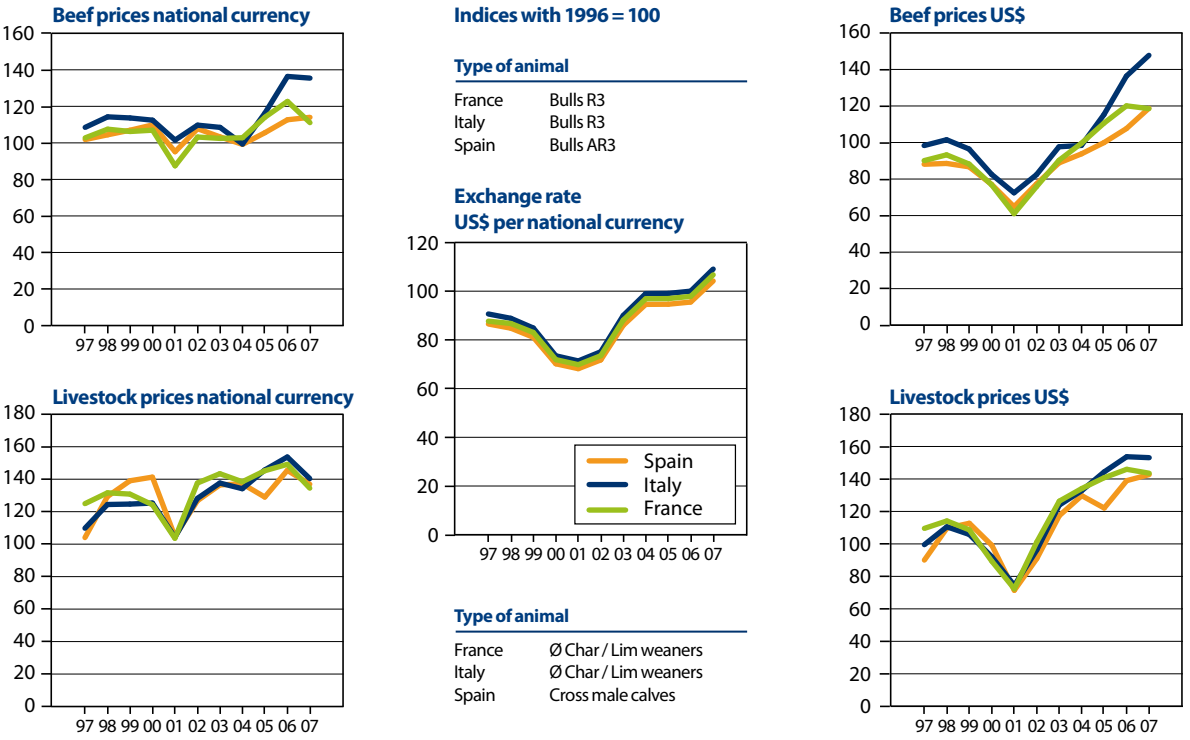
Explanations

Due to a lack of data in the year 1996, the Index 100 = 1996 was replaced by another Index = 100 year in the following countries: Beef prices in Colombia: 1999; Beef prices in Sweden: 2001; Livestock prices in Norway and Sweden: 2002.

2.6.1 Price developments in Austria, Germany, United Kingdom 1997-2007



2.6.2 Price developments in France, Italy, Spain 1997-2007



Austria (Johannes Minihuber)

The cattle **numbers** in Austria remained constant in 2007 and 2008, with dairy cow numbers slightly decreasing and suckler-cow numbers slightly increasing. The beef production in Austria was basically stable without major regional shifts but with some changes in the final product composition. There is an ongoing trend towards finishing young bulls (+2 percent), organic young beef from heifers and steers less than 12 months (+5 percent) on the one hand and a decrease of beef from cows (–5 percent) as well as heifers and steers from non-organic production on the other.

One of the reasons for this development was the enlargement of **quality beef production** under clearly defined quality programmes, covering young bulls and heifers (+ 3 to 5 percent), organic quality steers (+30 percent, coming from a low level) and organic young beef (+7 to 8 percent). All figures are for 2008 compared with 2007.

In the first six months of 2008, the average **price** level for slaughter cattle was about € 0.20 per kg carcass weight (+8 percent) higher than in the same period of 2007. The average price for (productive) live cattle (calves and weaners) was about € 0.1 per kg live weight (~ 3 percent) lower than in 2007.

There was no major change in the **disease** situation except some border regions became control zones, because of the Bluetongue disease in neighbouring states.

As regards **trade, more live slaughter cattle** were imported from Czech Republic, Slovakia, Hungary, Slovenia and Romania. A total of 18 percent of the slaughtered cattle were imported in 2008, compared to 14 percent in 2007. **Beef imports** in 2008 were less than the previous year, mainly because of the trade restrictions facing Argentina and Brazil.

With the reduced coupled payments for production, more funds were directed towards assistance for **investments** into new agricultural buildings and indoor mechanisation could be observed. An additional (action-) program for converting into **organic** production has been implemented, too.

The production regulations of the (voluntary) Austrian **environmental** program (called ÖPUL) were tightened (for example lower nitrogen limits per hectare). As a consequence, some intensive farms quit the environmental program. As a result of **bio-energy** support, land rents increased, contributing to higher product prices.

Canada (Dan LeRoy)

The Canadian beef and cattle industry had a **difficult** year in 2007. Fed and feeder cattle **prices declined** throughout the year as the US$ depreciated. Prices were historically weak but stable during the first half of 2007 as strong demand in the United States offset the negative pressure from a relatively **higher Canadian dollar**. However, as the exchange rate passed par in the fall and demand faltered in the United States, cattle prices fell sharply. A compounding factor was that **retail** prices of beef in Canada were under pressure from large frozen beef inventories in the United States and supplies of competing proteins, especially pork.

In January 2008, the **outlook** for the coming year for the beef and cattle industry in Canada was **not optimistic**. At that time, it was believed that improved conditions would require either a substantial decline in the US dollar exchange rate or a drop in barley and other input prices. Falling to steady gross revenues combined with much higher input costs had made cattle feeding in Canada in most of the feedlots a money losing activity.

At present, feedlots owners are responding to losses in a variety of ways, such as **reducing** the number of animals placed on feed. Compared to June 2007, the number of cattle on feed is **down 10 percent** or more in Alberta and Saskatchewan. Due to relatively low domestic prices for feeder cattle, **exports** have been **growing** rapidly. With the exception of the severe drought in 2002 which motivated many herd dispersals, feeder cattle exports have reached **20 year highs**. Fed cattle exports from Canada have been larger than usual as well. Over the course of most of the last 18 months, exports have exceeded the 1998-2002 average. Despite an existing large excess packing capacity in Alberta, stronger beef demand south of the border has enabled US packers to profitably outbid those in Canada.

Finally, it appeared that mandatory **country-of-origin labelling** of red meat, including beef and pork, would be imposed by the United States government in September 2008. It is inevitable that costs added by this law will be reflected in reduced prices for Canadian livestock and meat.

Packing plant in Brazil

Feedlot in the U.S.

3 Comparison of typical beef finishing farms in 2007

Silage storage area in Italy

Packing plant in Brazil

Transport of sugar beet silage of Brazil

The National Congress in Brasilia

3.2 Overview of the beef finishing farms

Introduction

A total of **47 typical** farms from **20 countries** were analysed for beef finishing. 16 of these farms combine weaner production in their own cow-calf enterprises and finishing of the cattle in their finishing enterprises. These farms participate in both the comparison of beef finishing, presented in this chapter, and cow-calf in the next chapter. All farms produce **male animals (bulls or steers)** which are the focus of the comparison (see Chapter 1.4). The entire range of cattle sold is shown in Table 3.2.2 but only the male animals were analysed.

The **farm names** are defined by combining the abbreviated country name and the total number of cattle sold per year. To improve readability when addressing individual farms, the cattle numbers were rounded to the next reasonable figure. The exact cattle numbers are provided in Table 3.2.2 and Table 3.2.3 on the following two double pages. Farms classified as 'top management' have a 'T' suffixed to their name.

Selection of regions and farms for comparison

The regions were selected to represent the **most important** regions in terms of production in their countries. The farms defined in this region are supposed to represent a) farms that are able to generate a living from beef finishing and/or b) farms representing a high share of the regional production. For more details on the selection procedure, the regions and the farms see Chapter 1.4 and the 'Standard Operating Procedure to define typical farms' available on the ***agri benchmark*** website at www.agribenchmark.org/methods_typical_farms.html .

How to read the figures

Most figures on the comparison provide the farm names on the X-Axis and the variable(s) under consideration on the Y-Axis. Within each country, farms are sorted by size. At the bottom of most right-hand pages, countries are grouped into regions.

The bottoms of the left-hand pages provides information on the variables displayed in the figures on the right-hand pages, if necessary.

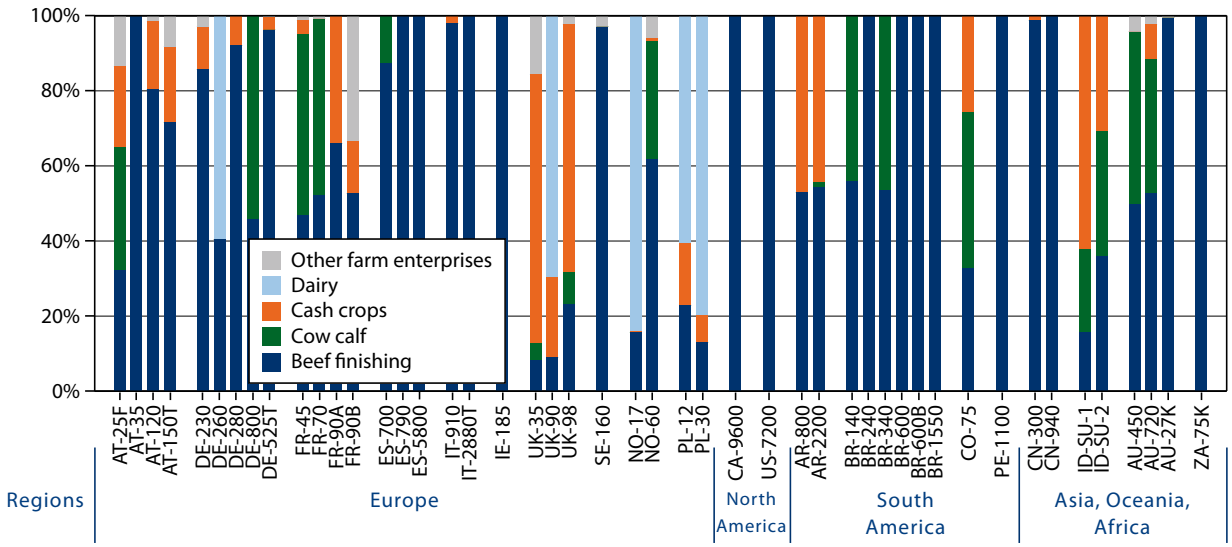
Beef finishing is an important enterprise

The extent to which farms are specialised into beef production can be seen in Figure 3.2.1. The indicator to measure the degree of specialisation is the percentage **composition** of the total **market returns**. Government payments are not reflected in this picture because a) most of them are decoupled from production and b) their proportion of total returns tends to become less over time (see also Figure 3.12.1).

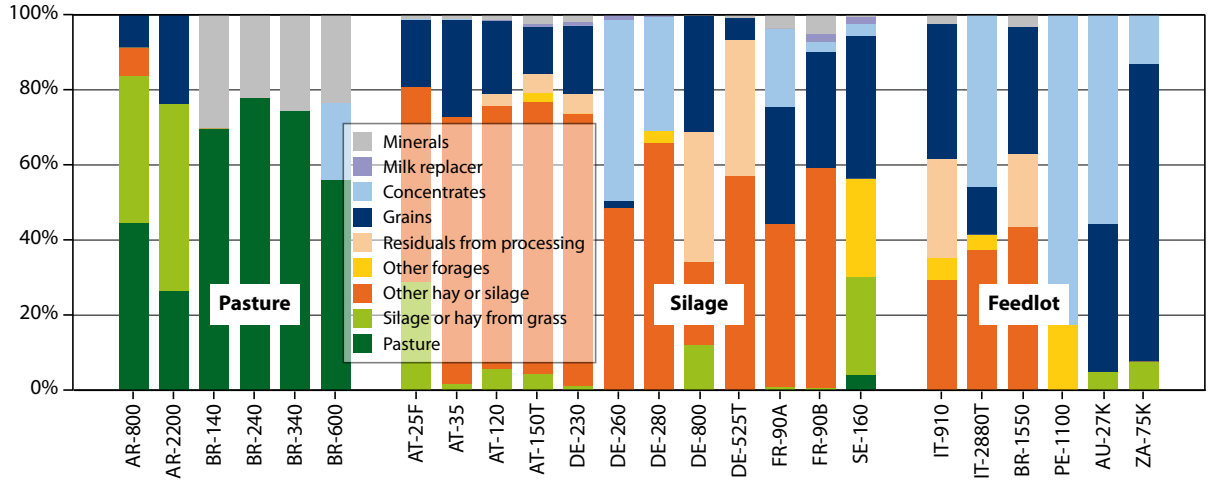
Most farms generate the majority of their returns from livestock, either highly **specialised** in beef finishing (for example the feedlots in ES, CA, U.S., BR, PE, CN, AU and ZA but also the grazing systems in Brazil and some other EU-farms) or in combination with **cow-calf** (AT, FR, NO, BR, CO, ID, AU) or **dairy** (DE, UK, NO, PL). **Cash crops** are important activities for two UK-farms, the Argentine and the Indonesian farms.

Note: In the following, the beef finishing enterprise will be addressed as **finishing enterprise**.

3.2.1 Composition of market returns (percentage of total market returns)



3.3.1 Dry matter feed composition for selected farms (percent of dry matter)



3.3.2 Production systems

I. Pasture

Grazing based systems, mainly found in the Southern Hemisphere and in Ireland and the UK, mostly steers

II. Silage

Maize (and grass) silage + grain / soybean based systems in the intensive farms in Austria, Germany, France, UK, Norway, Sweden, China, mainly bulls in stables

III. Feedlot

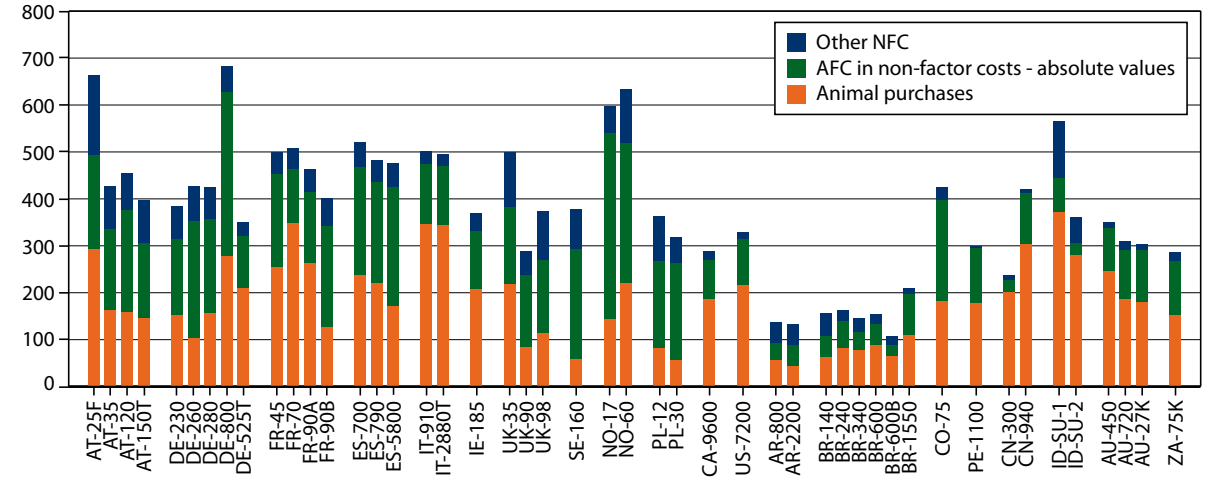
Corn, grain, soybean + hay (straw) based systems in feedlots, mainly in the U.S., Canada, Australia, South Africa, Peru, Italy and Spain, mainly steers, purchased feed

IV. Cut & Carry

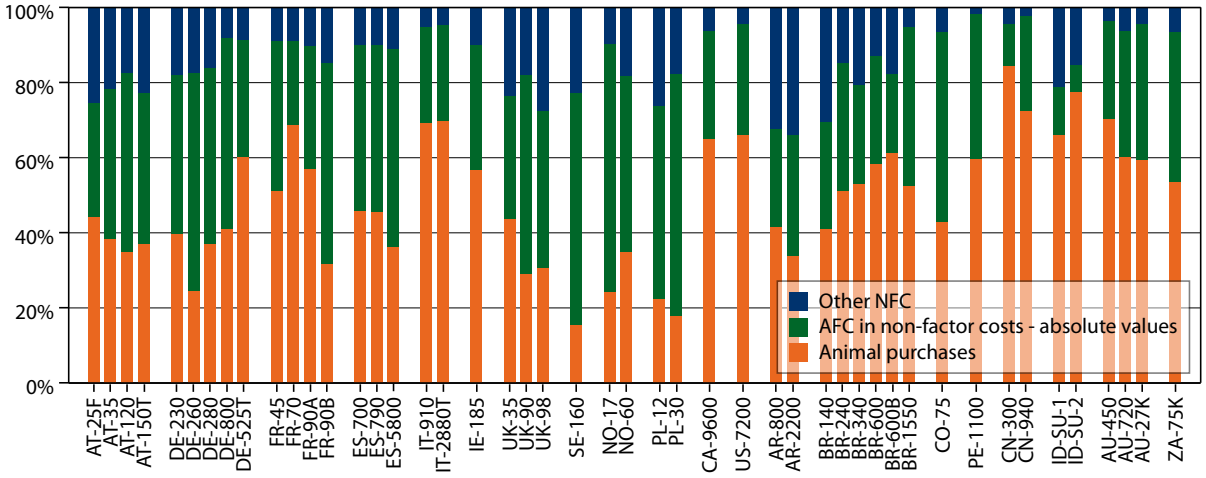
Fresh grass cut & carried daily to the cattle mainly in smallholder farms in developing countries, for example India, Indonesia, parts of China

3.8 Non-factor costs (NFC) and approximation of feed costs (AFC)

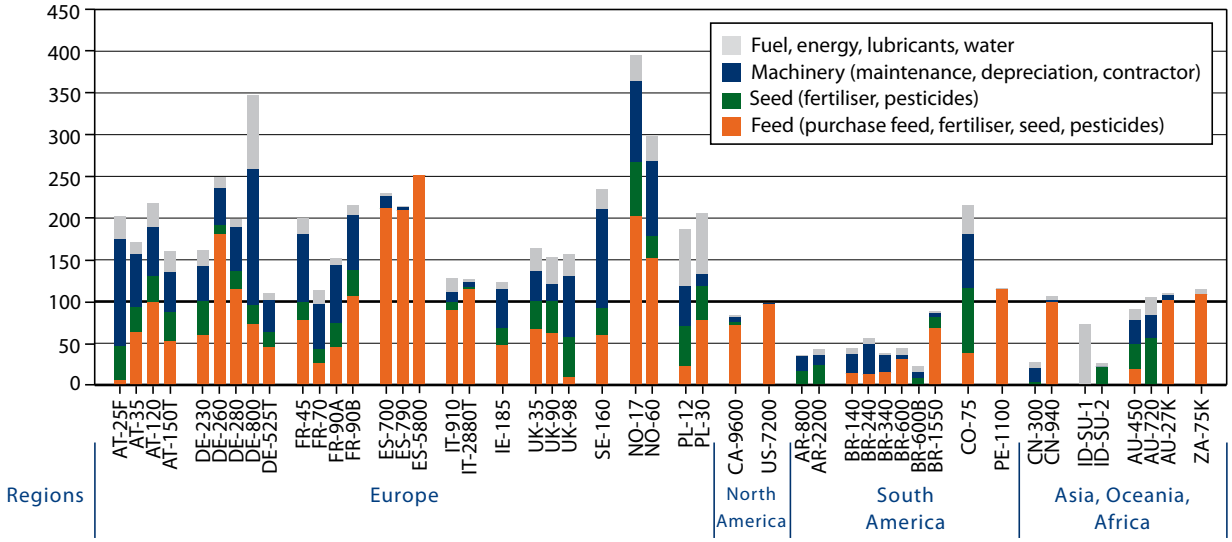
3.8.1 Non-factor costs by animal purchases, feed and other costs (US$ per 100 kg carcass weight)



3.8.2 Non-factor costs percentage composition (US$ per 100 kg carcass weight)

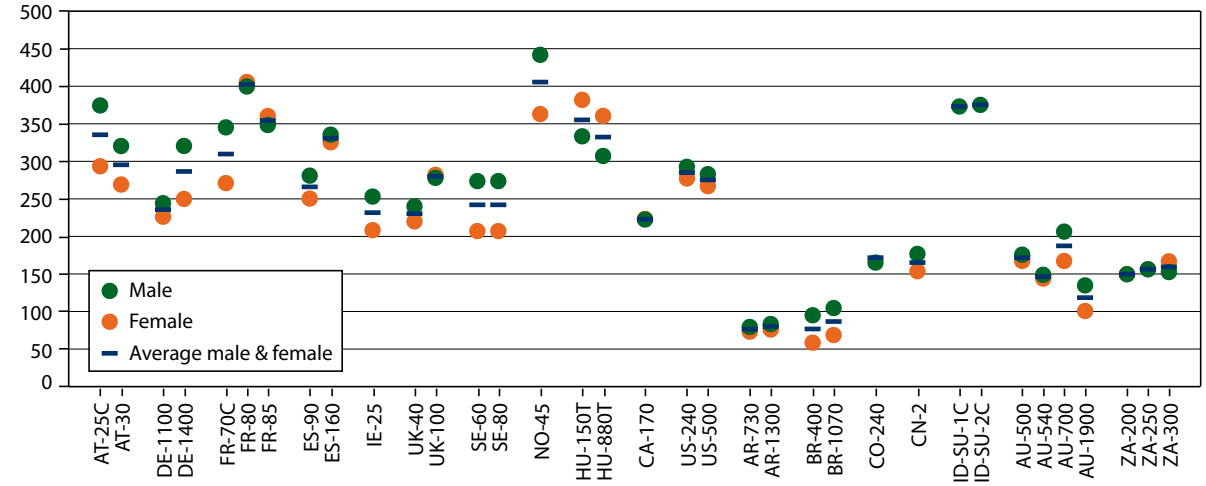


3.8.3 Approximation of feed costs (AFC) (US$ per 100 kg carcass weight)

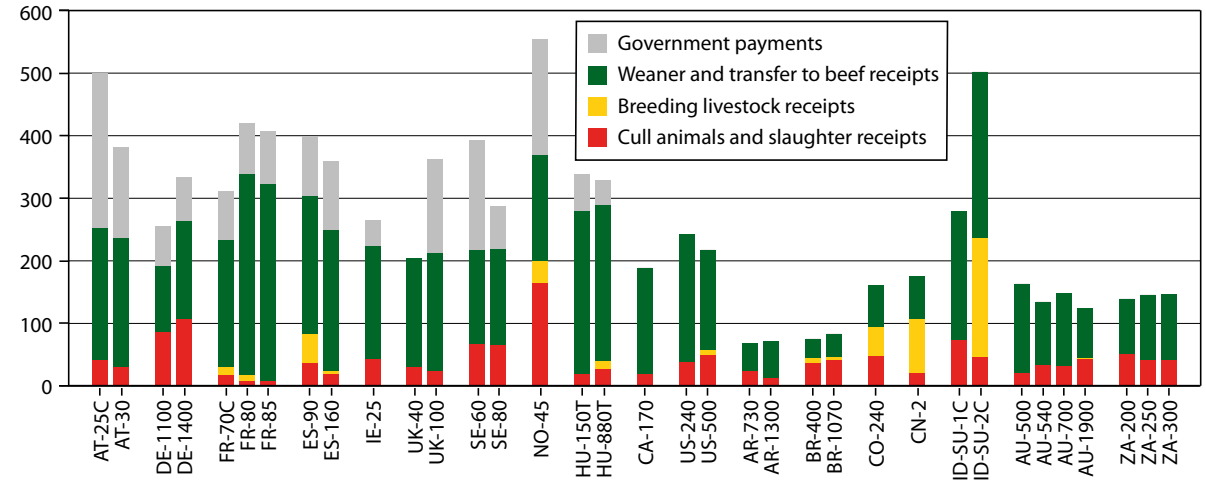


4 Comparison of typical cow-calf farms in 2007

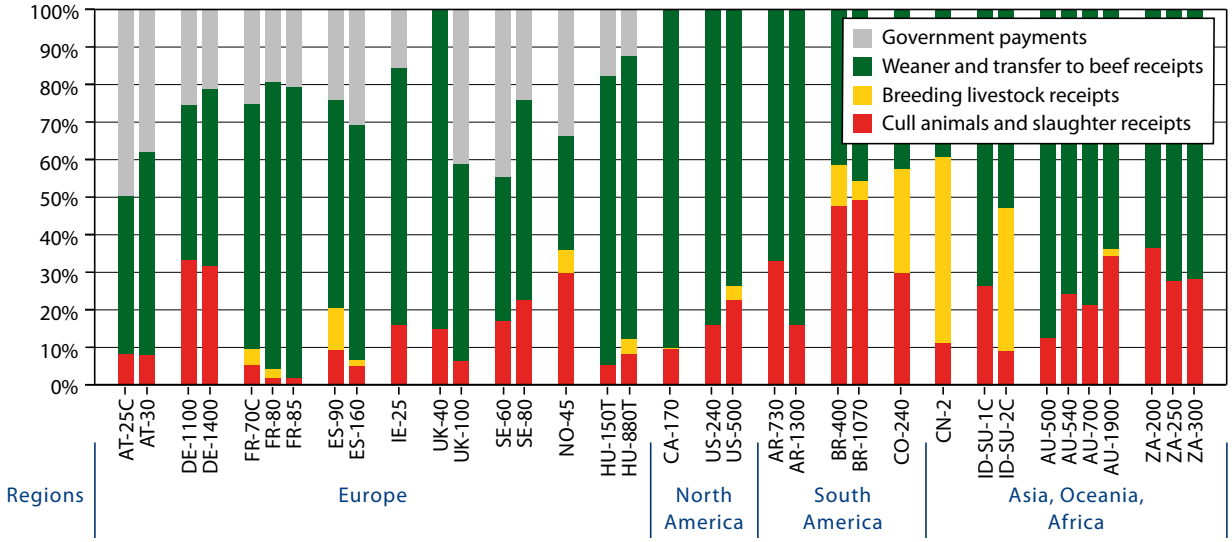
4.5.1 Weaner prices per weight (US$ per 100 kg live weight)



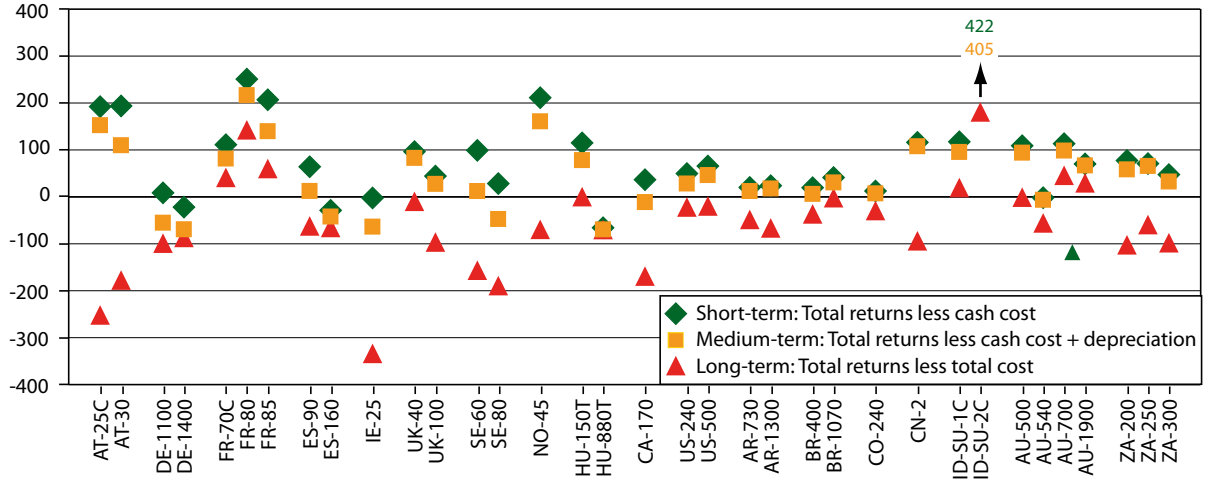
4.5.2 Total returns (US$ per 100 kg live weight sold)



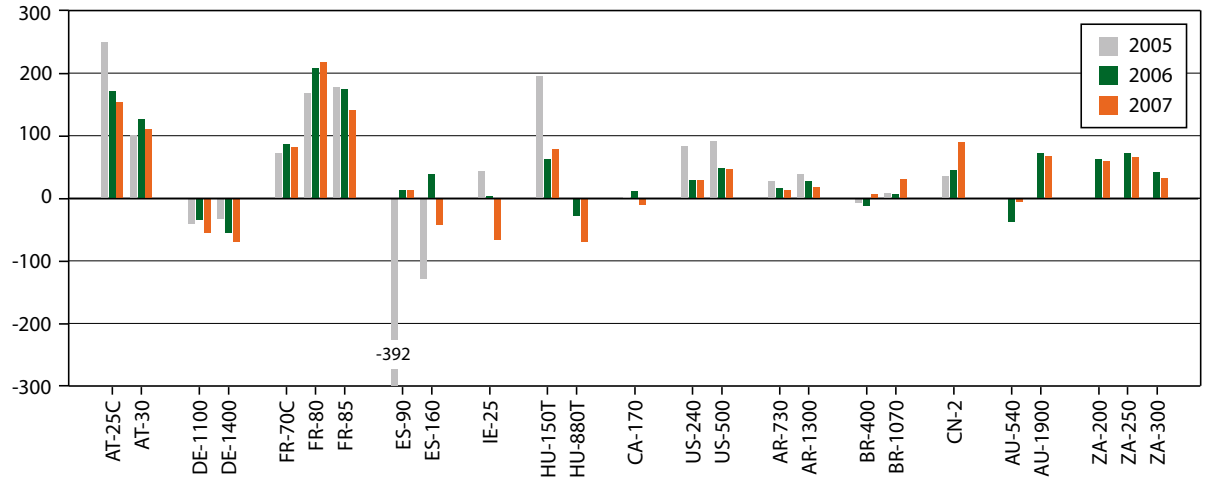
4.5.3 Composition of total returns (based on US$ per 100 kg live weight sold)



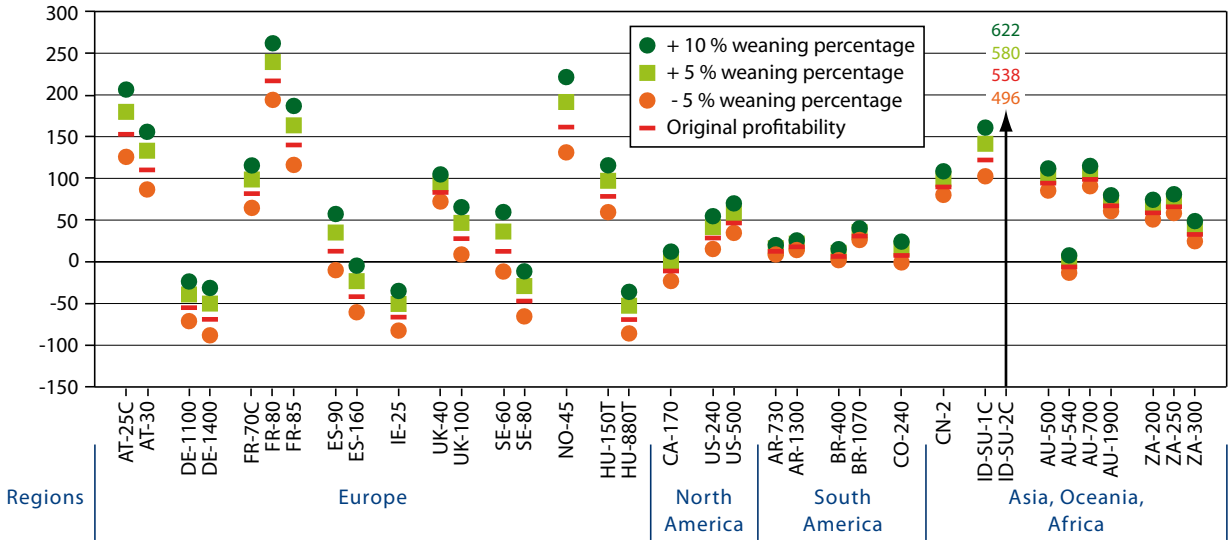
4.10.1 Short, medium and long term profitability (US$ per 100 kg live weight sold)



4.10.2 Time series of medium-term profitability 2005-2007 (US$ per 100 kg live weight sold)



4.10.3 Sensitivity: Weaning percentage on medium term profitability (US$ per 100 kg live weight sold)



4.12 Merging cow-calf and beef finishing enterprises

Why it was done

There are 14 out of the 35 cow-calf farms finishing their own weaners in their own finishing enterprise. The **transfers** of weaners and other cattle from the cow-calf enterprise to the beef finishing enterprise (and to other farms) are treated as sales and are valued with the **market price**. The market price represents a) the **opportunity price** for the cow-calf enterprise for selling the weaners to other farms and b) the **opportunity costs** of the beef finishing enterprise to buy from other farms.

When looking at the analysis of Chapter 3 and 4, it is obvious that **weaner prices** are **crucial** for the profitability of both enterprises. High weaner prices benefit the cow-calf enterprise and disfavour the beef finishing enterprise and vice versa. Consequently, it was decided during the Beef Conference 2008 to have a closer look at the interaction of the enterprises and to merge the data for a common analysis. Further reasons are:

- Gain more comprehensive information behind the finishing figures **(birth to slaughter)**.
- Get prepared for a joint **emission** analysis of cow-calf and beef finishing.
- Simulate **trade** of weaners on regional level and between countries (see below).

How it was done

When merging returns and costs, the transfer price between the two enterprises is taken out of the calculation to avoid double counting. The calculation of merged returns and costs is done as follows:

Merged returns
Meat receipts cow-calf + Meat receipts finishing
\+ Breeding receipts cow-calf
\+ Coupled direct payments cow calf and finishing

Merged costs
Cash cost cow-calf + Cash cost finishing
\+ Depreciation cow-calf + Depreciation finishing
\+ Opportunity cost cow-calf + OC finishing
— Purchase cost weaner calves finishing
+ Purchase cost additional animals finishing

There were two farms buying **additional cattle** for finishing apart from using their own weaner calves, the ES-160 and the NO-45. The cost for theses animals were **added** to the merged costs.

The merged returns in Figure 4.12.1 are the sum of the returns from cow-calf and beef finishing less the returns of the animals transferred to **and analysed** in the beef finishing enterprise. The returns from 'weaner and transfer to beef receipts' in the merged data of the European farms reflect animals that were not analysed in the beef finishing enterprise (heifers, cows, calves).

What are the results

The most interesting results of the merging exercise appears to be the profitability shown in Figure 4.12.3. The analysis confirms what has been shown in Chapters 3.11 and 4.10: On a per kg carcass weight basis, the profitability of the cow-calf enterprise in most of the farms are higher than in the finishing enterprises.

In most of the **European** cases the cow-calf enterprise 'helps' the entire system (of producing calves and finished animals) to become at least short- and medium-term profitable by adding coupled payments such as suckler-cow payments (Austria, Spain, Norway) or organic payments (Germany) to the system.

However, this explanation can not be taken for the non-European countries and the UK, where no coupled payments exist. Therefore, more analysis will be done into the reasons for the different levels of profitability. The two principle reasons appear to be

- the level of the **weaner prices**. It must, for example checked if weaner prices need to be modified (for example prices net of transport and trading margins) to better reflect the real situation.
- **cost allocation** issues. It appears, however, unlikely, that there is a systematic error in cost allocation, leading the results into the same direction in all farms.

Conclusions for further analysis

Merged data on both the return and cost side now cover the whole life span of the animals from birth to slaughter and refer to the total weight sold. This means that a significant amount of information is added to the analysis. Consequently, starting with the 2009 season, ***agri benchmark*** analysis merging the figures shall be done on a regular basis.

The concept can even be extended to enterprises operated on different farms under the following conditions:

1. There is a **real-world link** between the animals produced on both farms, for example if weaner calves are typically transferred from cow-calf farms in one region to beef finishing farms in another region.
2. The weaning (sale) **weights** and the **prices** of the calves sold from the cow-calf enterprise and the calves bought by the beef finishing enterprise must be **identical**. For the prices, transport and transaction cost should be considered to the relevant extent.