agri benchmark

Beef and Sheep Season 2016
– a summary of main findings

agri benchmark

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Introduction

This report provides selected results from the *agri benchmark* Beef and Sheep Season 2016.

Result data bases, tools, additional data and updated presentations are available from the member section of the agri benchmark website at *www.agribenchmark.org*.

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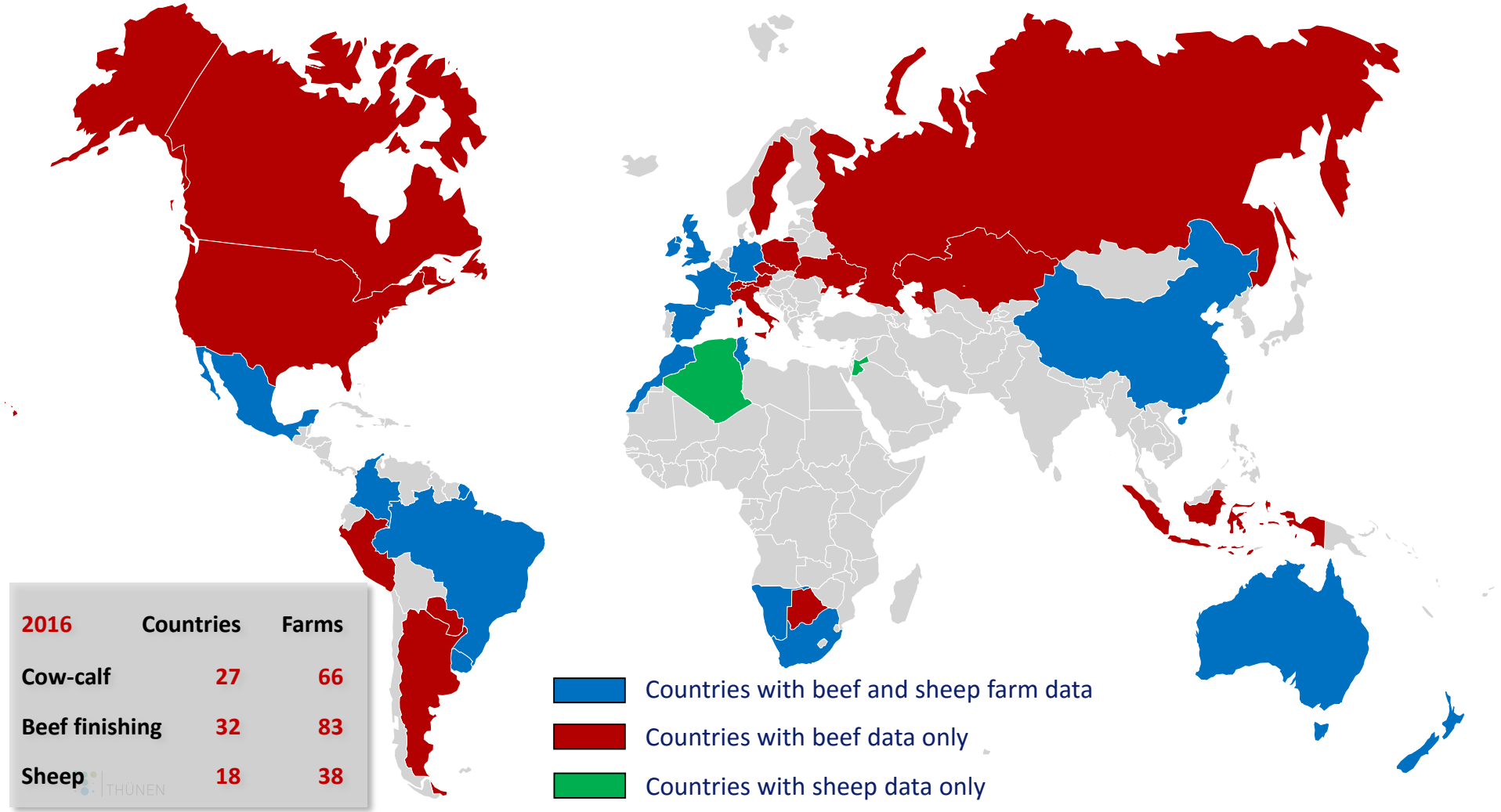
The *agri benchmark* Headquarters Team

Content

Farm names

Farm names in the charts are composed of a country name with two letters (internet country domain name) and a number.
The number indicates the number of suckler-cows / ewes (in cow-calf / sheep farms) and the total number of cattle sold (in beef finishing farms).
Suffixes mean: K=Kilo=1000, for example US-75K=US-75000; T=Top performing farm

The *agri benchmark* Beef and Sheep Network 2016



2016	Countries	Farms
Cow-calf	27	66
Beef finishing	32	83
Sheep	18	38

Latest beef developments in participating countries

In a workshop of the Beef and Sheep Conference 2016, the major developments of the participating countries were presented and discussed. The following is a short summary in alphabetical order of countries.

Argentina

- Inflation raised to more than 30 percent per year.
- The newly elected president Macri eliminated export bans and reduced export taxes dramatically – rising beef exports are likely.
- The reduced beef/corn price ratio makes feedlotting less profitable and attractive → longer backgrounding periods on pasture.

Australia

- … experienced huge variations in cattle prices over recent years; 23 percent average monthly variation (highest month on lowest month).
- Total Factor Productivity has fallen since 2006 → need for raising productivity growth.
- 2015-16 was one of the strongest El Niño events ever (hot and dry).

Austria

- The removal of the coupled payments for suckler cows led to a significant destocking of suckler cows' numbers.
- At the same time, increased export demand led to increases of live cattle prices.

Botswana

- FMD and BSE affecting beef export which is restricted by a green zone.

Brazil

- … continues to be characterised by political and economic instability which lead to rising inflation and reductions in investment activities.
- The BRL devaluated significantly and prices of imported inputs increased, resulting in higher cost of production.
- Females' slaughter, drought and decreased productivity → low supply and high prices for calves.

Canada

- The highest consumer demand in the last 25 years.
- The highest fed cattle prices in history but more volatility is expected and producers are cautious to expand.

China

- Rising trend for production costs, particularly labour costs.
- Government provides more support for the beef cattle industry, particularly for the expansion of the suckler-cow herd.
- First decrease of domestic beef prices in the last 15 years.

Colombia

- ... saw exports decreasing by 20 percent while new domestic players are entering into the meat market.
- High loss rates due to drought, subsequent contraction in livestock inventory and increase in cattle prices.

Czechia

- High export demand for live animals (increased by 21 percent) led to increasing livestock and beef prices.
- Release of legislative constraints for land as the subject of investments resulted in rising land prices.

Latest beef developments in participating countries

France

- Producers went to the street to ask for higher prices. Government launched a support programme of more than EUR 600 million on tax relief and loan guarantees.
- Bluetongue in the East of the country: weaners were blocked for about 45 days on farms.
- CAP reform rather beneficial for cow-calf producers and smaller farms, less positive for beef finishers with high stocking rates.

Germany

- Consumer preferences shifted from pork to beef, this combined with a slight decrease in beef production led to increased beef prices (5 per-cent on average for young bulls).
- High and increasing land prices.
- Decrease in dairy cattle inventories resulted in a shortage and high prices for dairy sourced calves.

Indonesia

- Import policy: restrictions for live cattle and boxed beef, incentives for breeding domestic cattle.
- Quarterly basis of imported quota
  → difficulties for import logistics and Australian exporters.

Ireland

- Brexit and its potential effects are a concern due to the large quanti-ties of beef exports to the UK.
- Ireland re-introduced some coupled payments for cattle.

Italy

- Livestock and feed prices' volatility
  → increased competitiveness of imported beef from Poland
- Implementation of the CAP reform. beef finishers are particularly hit and receive coupled payments which do not compensate for loss of Single Farm Payments → uncertainty in the sector

Mexico

- New, large player in the beef industry (SuKarne) producing 800,000 head per year with 65 percent export → potential implications on cattle and inputs prices, higher exports, lower imports.

Morocco

- The worst drought during the last 10 years.
- Unexpected increase in feed prices led to destocking of the herd size
  → high animal supply and price drop by 50 percent.

Namibia

- Cope with drought by a) selling excess livestock earlier, b) grassland pro-tection and c) exporting weaners to be finished in South African feedlots.
- High investments in the prevention and cure of FMD.
- 60 percent of cattle is not eligible for export markets.
- The first country in Africa obtained official acknowledgment, as having insignificant BSE risk (World Organisation for Animal Health).

New Zealand

- Trend away from less flexible breeding cow systems into more flexible cattle finishing systems
  → decline in breeding cows' numbers, increase in dairy sourced cattle.

Latest beef developments in participating countries

Paraguay

- Economic and political situations in the importing countries (Russia, Brazil, China) resulted in decreased exports and the lowest meat prices in the last two years.
- Heavy rains and floods led to the obstruction of livestock transport.

Russia

- … experienced huge investments and governmental support to boost the beef industry

South Africa

- The lowest annual total rainfall since 1904 was recorded.
- Reduction of the herd size (50 percent in some farms, 15 percent nationally)
- Inefficient management practices, no governmental support.

Spain

- Low domestic beef consumption, increased and competitive exports, including live exports, mainly to North Africa / Middle East.
- Implementation of the CAP reform: beef finishers lose Single Farm Payments which cannot be compensated by new coupled payments.

Sweden

- Sweden is characterised by high production costs, high dependence on subsidies for suckler-cows production (50 percent of income)
- This results in high sensitivity for changing subsidies' conditions as well as uncertainty and low level of investments.

Switzerland

- Livestock reduction policy; convert subsidies to pasture system → higher livestock and beef prices, more imports.
- Switzerland improved animal welfare issues, prudent use of antibiotics → high demand and prices for meat.
- Higher meat prices compared with the EU: 57 percent of the Swiss households buy abroad at least once a month.

Tunisia

- High market entry barriers, high vertical integration of beef supply chain: lack of competition.

UK

- The strong GBP led to reduced exports and lower competitiveness. This situation changed significantly after the Brexit decision in 2016.
- Bovine Tuberculosis (bTb): badgers as main wildlife source.
- The economic costs of a bTb breakdown are shared by farmers and government.

Uruguay

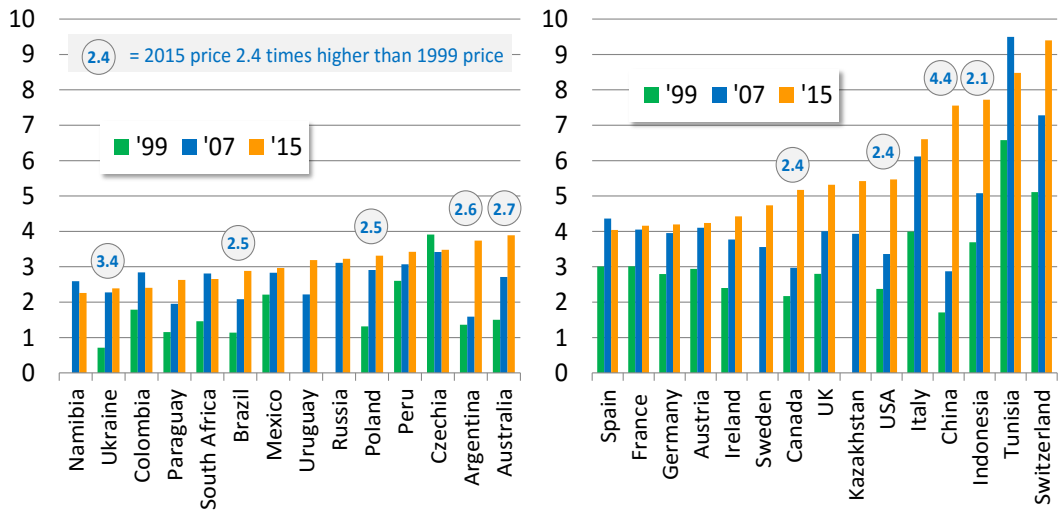
- Decline in beef exports' prices after more than 10 years of growth.
- The worst drought and flooding in the last 30 years.
- Estimated losses mount up to 1000 million dollars.
- Climate change is the most important issue and needs further analysis.

USA

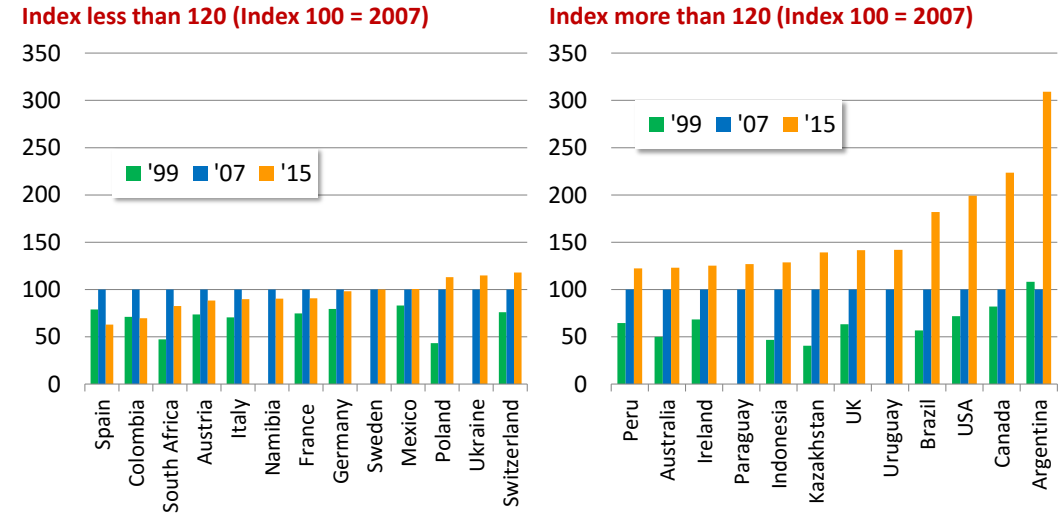
- The US has lower beef exports (mainly due to appreciation of the USD) and thus more supply on the domestic market.
- Fall of fed cattle prices by the end of 2015 after its peak in 11/2014.

Price developments in the last decade

Beef prices 1999, 2007 and-2015 (USD per 100 kg carcass weight)



Index of livestock prices 1999, 2007 and-2015 (Index 2007 = 100 based on USD)



Beef prices rising mid-term

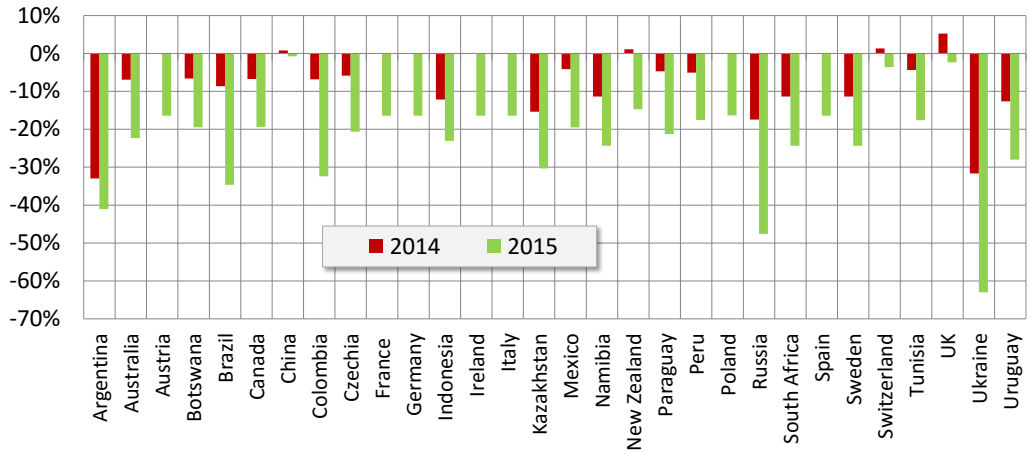
- The picture clearly shows rising beef prices in the last 15 years. However in recent years, price rises were less and in the last two years, prices in USD-terms even declined in some countries (see nest page for details.
- The countries with lower prices are mostly out of Europe (exceptions Poland and Czechia) but some of them have experienced massive price increases, coming from a low level (Argentina, Australia, Brazil, Ukraine).
- Countries with higher price levels are in Europe but also in Asia, North America and Africa. But countries like Canada and the US came from higher levels but even more than doubled prices in the last 15 years.
- China leads the development, coming from a low level and experiencing a quadruplication of beef prices.

Livestock prices principally follow beef prices

- Livestock prices are shown as an index to make the different reference units (per head, per kg live weight) comparable. 2007 was chosen as an index year as not all of them start in 1999.
- A mix of countries from around the globe show an increase of 20 index-points from 2007 to 2015. In some countries prices in 2015 were even lower than in 2007. Thus, developments of livestock prices appear to be more diverse than beef prices.
- Compared with 2007, the countries with the most profound livestock price increases were Brazil, USA, Canada and Argentina. This also applies to Australia, Indonesia and Kazakhstan when looking back further to 1999.
- The Chinese livestock prices are not shown here but from our typical farms we can conclude that they have developed similar to the beef prices – almost 3 times higher in 2015 than in 2007.

Exchange rate developments and recent impact on prices

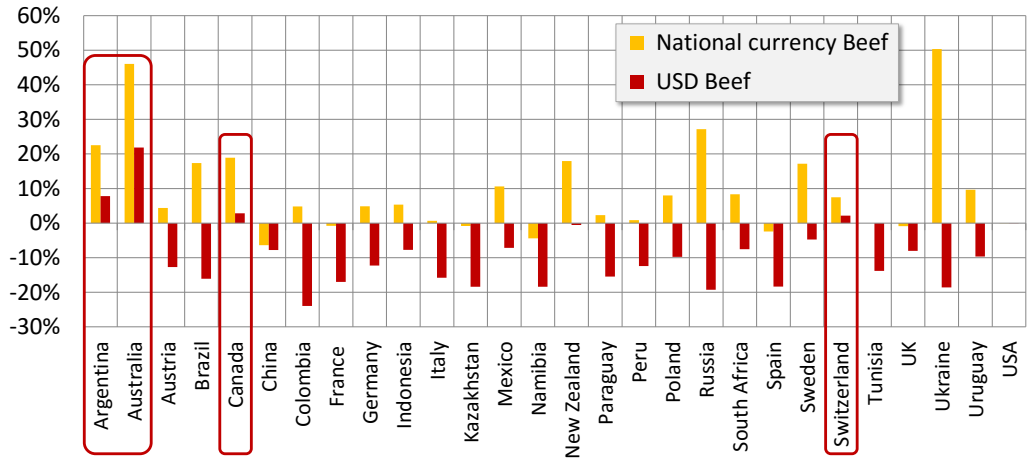
Exchange rate changes agaibst the year 2013 (national currency per USD in percent)



Devaluation of all currencies against the USD

- Our comparisons are presented in USD. This means that in all our results there is an impact of the currency developments.
- After long years of appreciation against the USD, most of the major currencies started to **depreciate** against the USD in the second quarter of the year **2014**. This trend continued in **2015**.
- The chart shows the percentage changes of the national currencies against the USD for the years 2014 and 2015 against the year 2013.
- It shows for all major currencies a **devaluation** against the USD between **10 and 30 percent** for the year 2015. Argentina, Brazil, Colombia, Russia and Ukraine are the extremes with more than 30 percent devaluation.
- The devaluation means for example that with unchanged prices in national currencies, the USD prices become **lower**.

Beef price changes in national currency and in USD 2015 vs. 2014 (percent)

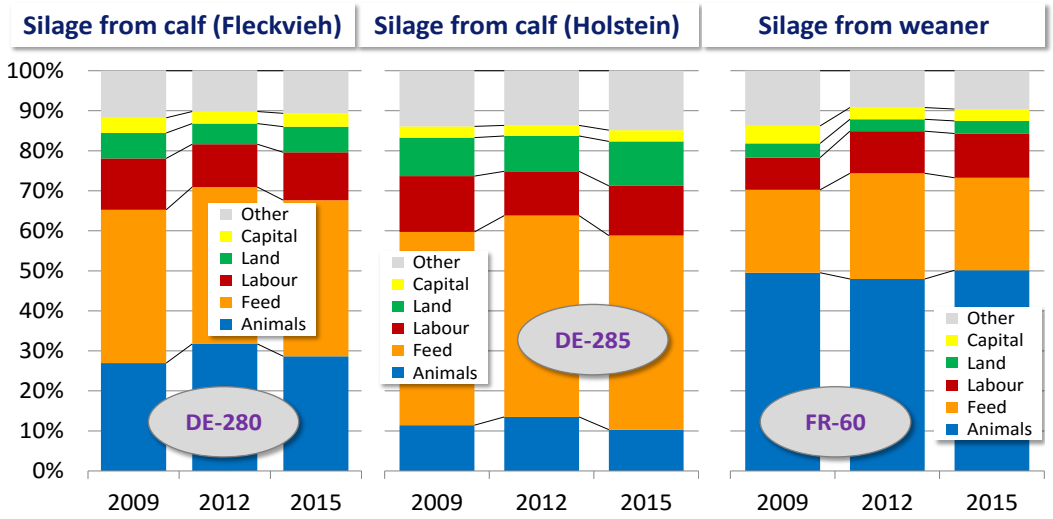


Contrast between domestic and USD beef prices

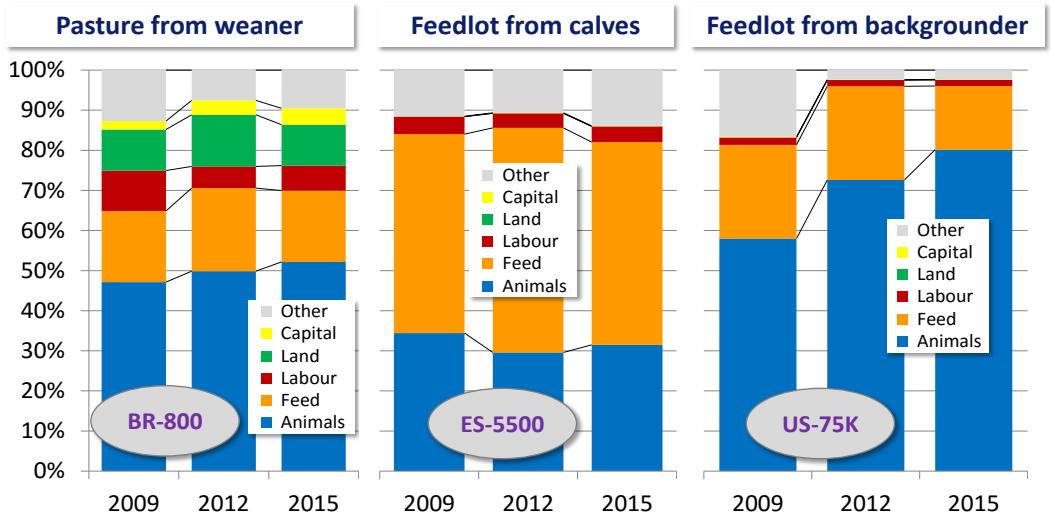
- In most countries, beef prices in **domestic currencies increased** in 2015 vs. 2014. In contrast and for the first time in the last ten years, China experienced a decrease in beef prices.
- In most cases, the exchange rate movements from above overcompensated the domestic price increases, resulting in **decreasing USD-prices**.
- The exceptions to this observation are Argentina, Australia, Canada and Switzerland where the domestic price movements were ‘stronger’ than the currency devaluation (marked with red frames).
- The same observations as for the beef prices can basically be made for the livestock price developments.

Changes in the cost structures of different production systems

How cost composition changed for different production systems (2009, 2012, 2015)



How cost composition changed for different production systems (2009, 2012, 2015)



Main changes feed and animal purchase cost

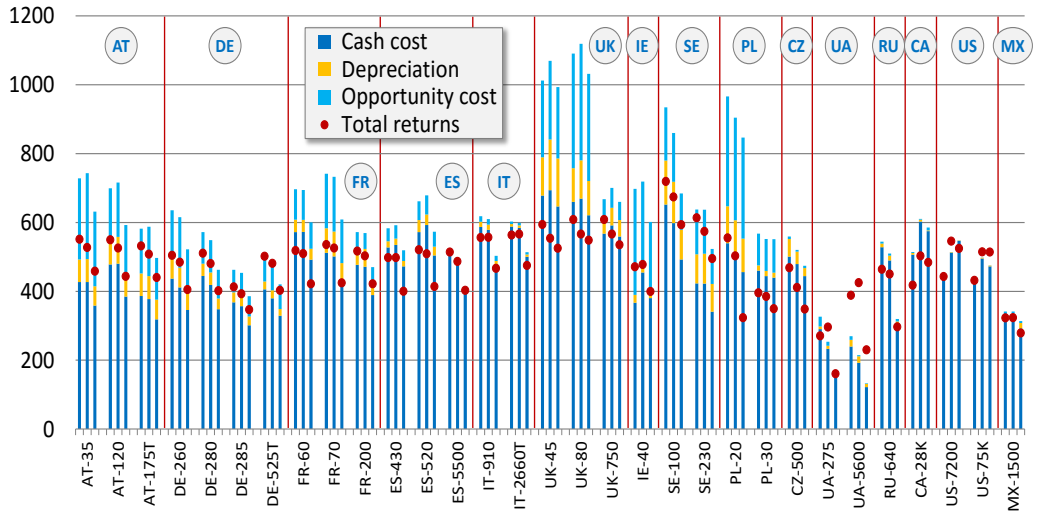
- Animal purchase and feed costs constitute more than 50 percent of total costs across the production systems and origins of animals.
- In the silage systems, feed and animal purchase costs are to some extent substitutes. Due to the relatively high prices for Fleckvieh-calves animal purchase costs are higher than for the farm with the Holstein origin. In contrast, the feed costs are higher in the Holstein farm.
- In the French farm finishing weaners from cow-calf, the proportion of animal purchase cost is about 50 percent and did not change much over the years.
- Feed and livestock prices were driving some changes which were, however, relatively small. Feed cost proportions were highest in 2009 when feed prices were high.

Dramatic developments in the US-feedlots

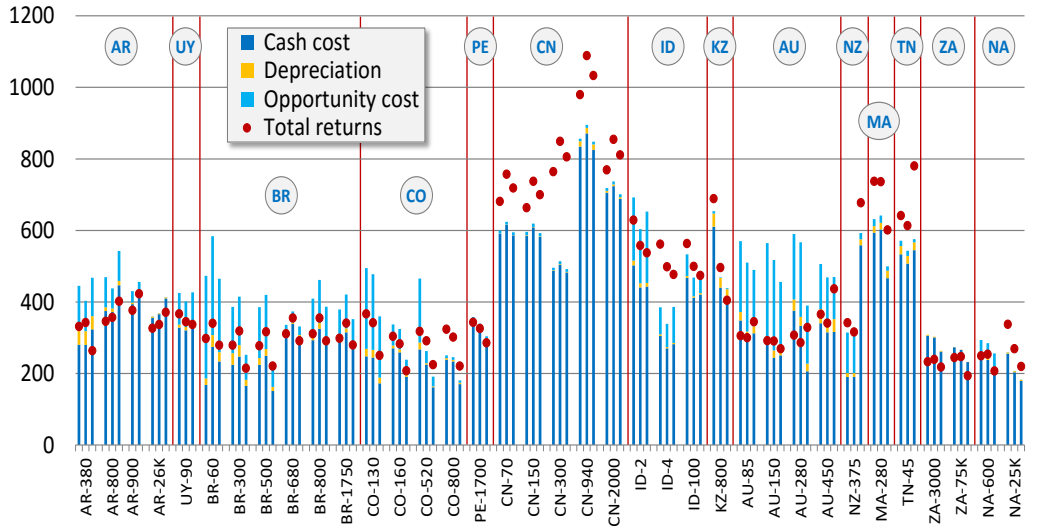
- The Brazilian pasture farm also finishes weaners and also has a proportion of approximately 50 percent animal purchase costs, with increasing trend due to higher livestock prices. At the same time, land costs have a higher importance.
- In the Spanish feedlot, feed cost show the highest proportion (exclusively purchase feed), followed by animal purchase cost. Here, the price peak in 2012 becomes most visible.
- The most obvious changes have occurred in the US-feedlot finishing backgrounders. Here, the proportion of animal purchase cost has been high anyway but it has increased dramatically in the recent years to 80 percent of total costs.
- The main reasons are historically high livestock (and beef) prices due to the low cattle inventory and at the same time relatively low feed costs.

Beef: cost, returns and profitability and their developments

European and North American countries (USD per 100 kg carcass weight)



Other non-European countries (USD per 100 kg carcass weight)

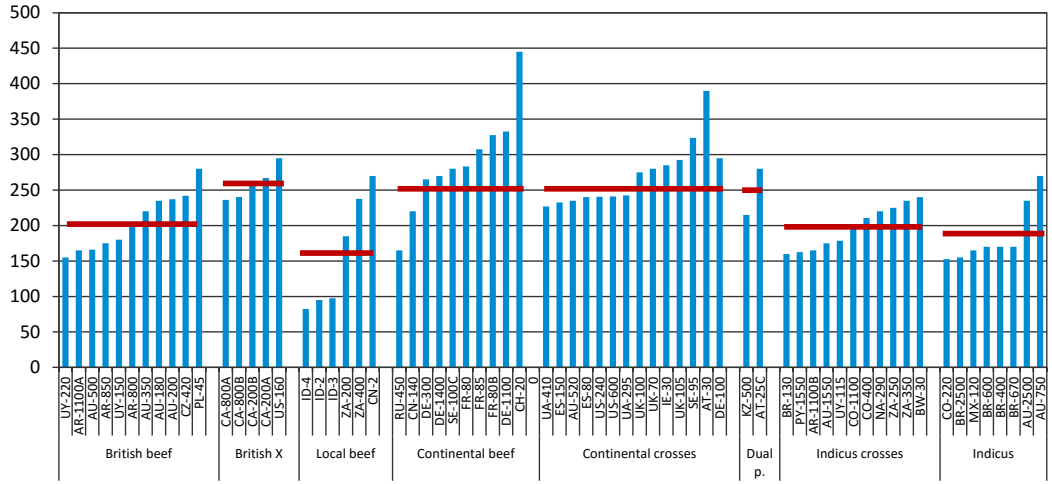


With few exceptions lower returns and costs

- The confrontation of costs and returns shows a low long-term profitability of the beef finishing enterprises, i.e., only few enterprises can cover total costs (enterprises in Ukraine, US, Colombia, China, Indonesia, Morocco, Tunisia).
- The lack of long-term profitability is one of the main reasons for structural change as these farms tend to go out of business with generation change.
- However, other enterprises (not shown here) and decoupled payments can compensate for losses in the beef finishing enterprise, providing a positive result on whole-farm level.
- The development for the European and North American farms is different: the EU-farms including Russia have seen downwards or sideways movements of prices and costs, the profitability was basically unchanged. In 2015 much of this effect comes from the x-rate movements explained above.
- The Ukraine, Canada, the US and Mexico have seen constant or rising prices from 2013 to 2014 and downwards or constant prices from 2014 to 2015.
- The picture for the other non-European countries is more diverse but also here the x-rate movements in 2014 and 2015 have a significant impact.
- In Brazil and China, prices and costs went up in 2014 and declined again in 2015.
- In Uruguay, Colombia, Peru and Indonesia a two years downwards trend of prices and costs could be observed.
- Australia and New Zealand show diverse developments but mainly with increases of beef prices in 2015 whereas Morocco, South Africa and Namibia show the opposite trend.

Production system issues for beef and sheep

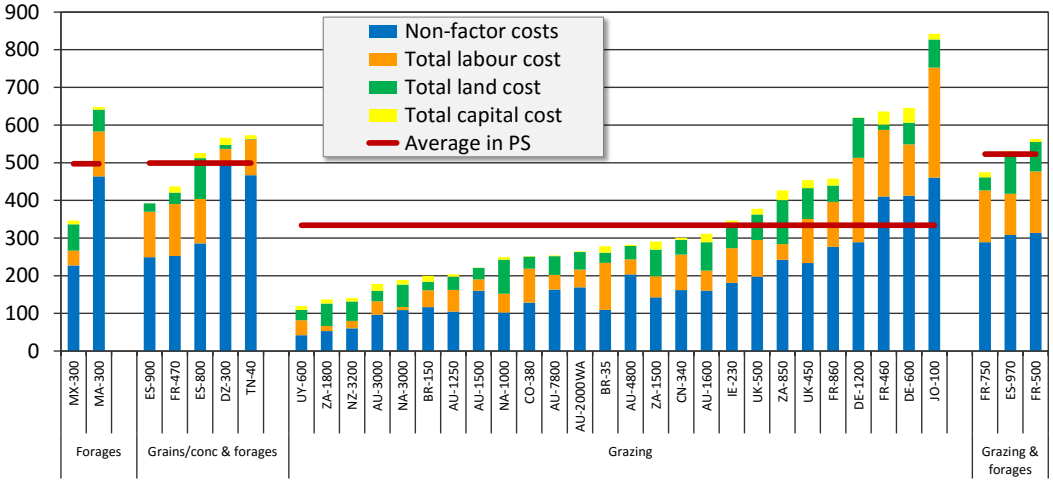
Weaning weights by breeds in cow-calf farms



Animals with European breeds seem to be heavier

- The weaning weights show significant variation within and between the groups, some of which reflect decisions to meet market specifications rather than breed characteristics (for example the Swiss farm and one of the Austrian farms).
- When looking at the averages of the breed groups it looks like the British crosses, the Continental and the Continental crosses have very similar weaning weights.
- Another similar group is the purebred British beef, the Dual purpose breeds, the Indicus crosses and the pure Indicus breeds.
- The lowest weights are in the 'Local beef' group and are clearly dominated by the low weights of the Indonesian Bali cattle.
- It has to be mentioned, however, that breeds often correlate with climatic conditions which do not allow high growth rates.

Total cost of sheep production (USD per 100 kg live weight)



Four sheep production systems

- Like for beef finishing we have defined four production systems based on the dry matter composition of the feed rations:
  Grazing: > 60 percent (of dry matter) from grazing
  Forages: > 60 percent from forages
  Grazing + forages: > 60 percent from grazing and forages
  Grains, concentrates + forages: > 60 % from grains, conc. + for.
- The total cost varies considerably between farms and countries, the lowest cost producer is the Uruguayan farm and the highest cost producer is the Jordan farm, both in the group of the grazing farms.
- Nevertheless, the average cost for the grazing farms is the lowest with 334 USD / 100 kg LW.

Latest sheep developments in participating countries

The introductory session of the Sheep Conference offered to the participants an overview of the current situation of the sheep production and international markets. The following is a short summary of that session.

Production

- Most of the world growth in production has been in China.
- After China, Oceania is the biggest production region.
- Africa (Sudan and Algeria), as well as Asia (India, Pakistan), also show important growth in production.
- In EU countries production has steeply declined (Spain, Bulgaria, France, Italy, and Ireland). In contrast, Russia has been growing slightly during the last years.
- New Zealand lamb crop fell in 2015/16 season mainly due to drought and small breeding flock.

Consumption

- In general, at the global level, the consumption for sheep meat is growing, mainly driven by countries in Asia (China, India) and Africa (Nigeria, Algeria and Sudan).
- In the last ten years, EU countries have shown a continuous decline. Australia and New Zealand also follow that trend. Lamb has seen large declines in more affluent households.
- Shoppers aged 35-44 and 55-64 have driven the decline in red meat, while volume has been flat amongst younger shoppers.
- Consumers tend to demand 'easy to cook' meats / pieces. This poses both a threat (especially when compared with poultry) but also an opportunity for the lamb and sheep industry.

Exports

- A large percentage of global exports (80 percent) are provided by Australia, New Zealand, the United Kingdom and Ireland.
- Australian exports are mainly to China, USA and Middle East, whereas, New Zealand's destinations are mainly China and United Kingdom.
- Live sheep trade has increased (Spain, Romania and Australia to MENA region mainly), becoming an important factor of production flows between regions.

Imports

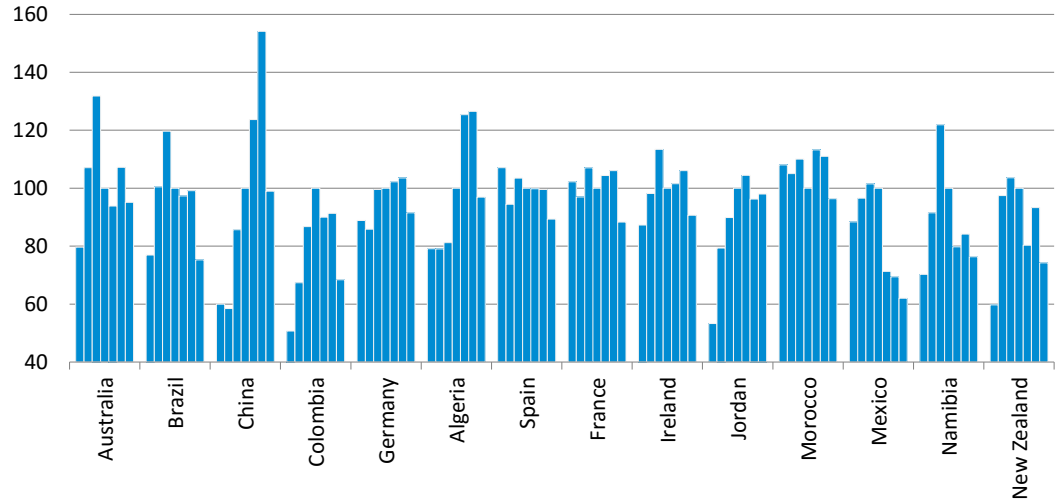
- EU is becoming an import region (25 percent of imports – mainly France, UK, Germany and Greece).
- China imports had been growing from 2010 to 2014. In 2015 imports declined mainly due to a high levels of domestic production (stocks) and meat substitution (pork).

Current world picture

- New Zealand's lamb crop in 2015/16 is the smallest for almost 60 years.
- Production in New Zealand higher earlier in the season but expected to fall.
- Production and consumption in the EU has been falling for the past few years and may continue to fall.
- Chinese demand declined in 2015; not expected to recover until late 2016.

Sheep prices and their developments

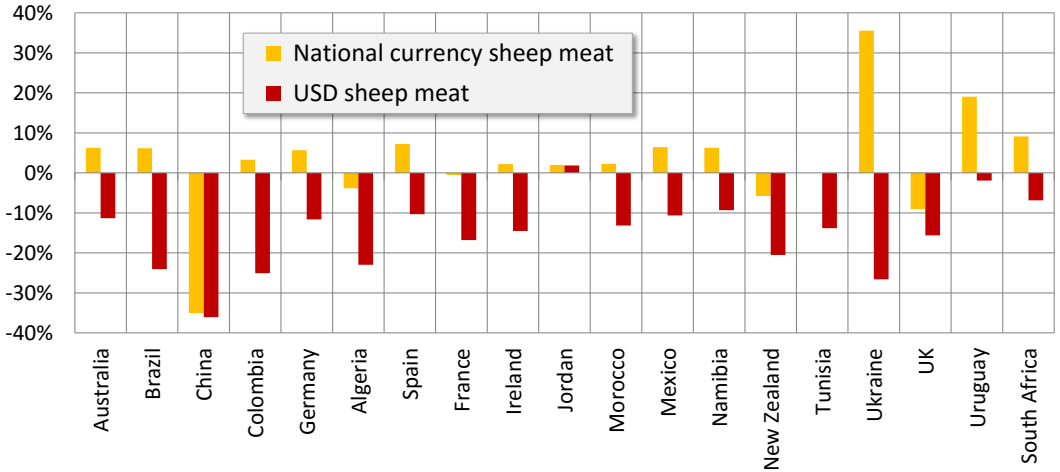
Historical USD sheep meat price series 2009 – 2015 (2012 = 100)



Price increase until 2012/2014 cannot be maintained

- Sheep meat prices are shown as an index to make them comparable. 2012 was chosen as an index year.
- In most of the countries, the prices in both national currency and USD showed an increasing trend with peaks in the years 2011, 2012 or 2013.
- However, the depreciation of the national currencies against the USD turned that tendency and as a consequence the USD prices decreased in the majority of the countries.
- Until 2014, China is an exception in this picture, showing a dramatic increase of the price for sheep but then prices decreased strongly due to the worsening economic situation.
- Another exception is Spain where the overall price trend was rather negative, resulting from decreasing demand and lack of export alternatives. This changed only recently but was overcompensated by the weakening of the EUR.

Sheep meat price changes in national currency and in USD 2015 vs. 2014 (percent)

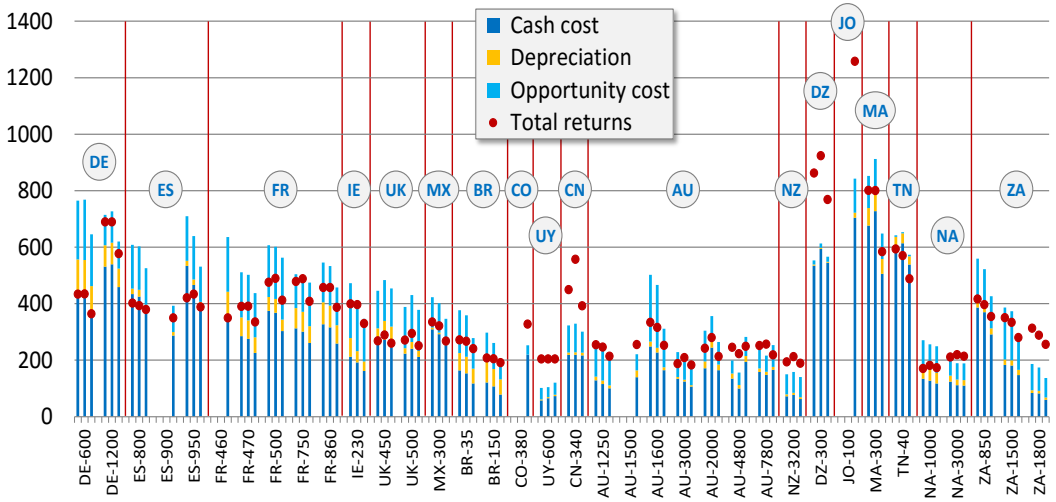


Decisive exchange rate effect on development of prices

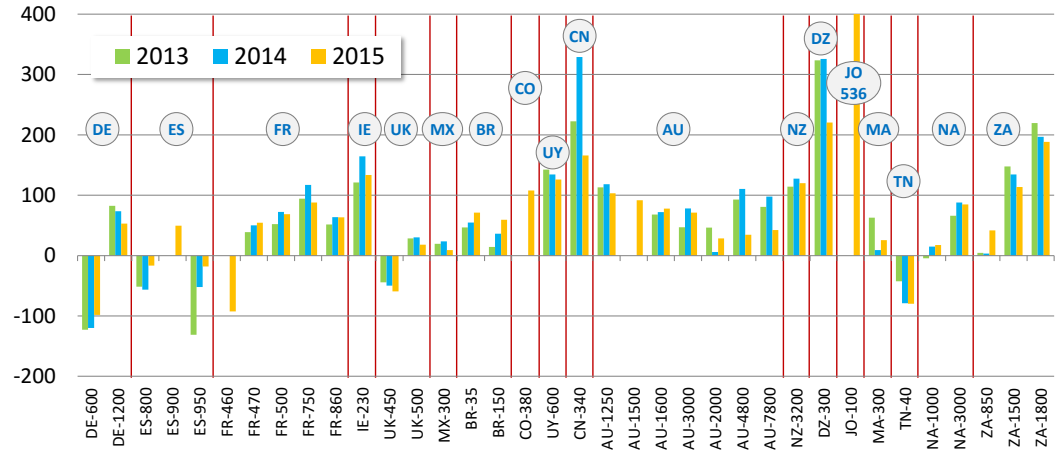
- As seen for the beef prices, domestic sheep meat prices in most countries increased in **domestic currencies** in 2015 vs. 2014. Exceptions were New Zealand and the UK.
- Nevertheless, in all cases except Jordan, the depreciation of the national currencies overcompensated the domestic price increases, resulting in **decreasing USD-prices**.
- **Jordan** was the only country experiencing an increase of the prices in both domestic and USD terms due to a stable x-rate to the USD.
- On a year to year bases, prices in **China** experienced the strongest reduction both in domestic currency and consequently in USD-terms due to the virtually unchanged x-rate between the RNB and the USD.

Sheep: cost, returns and profitability and their developments

Total cost and returns 2013-2015 (USD per 100 kg live weight)



Mid-term profitability 2013- 2015 (USD per 100 kg live weight)



Both costs and returns decreased in 2015

- Total costs are calculated by adding up cash cost, depreciation and opportunity costs (for own production factors).
- Total returns include all returns of the sheep enterprise: cull and slaughter animals, breeding returns and store lambs, wool returns and government payments.
- Almost all farms, the Uruguayan farm being the only exception, had in 2015 lower costs than in the previous year.
- At the same time, and following the price development, the total returns of the farms were also lower. In the wool producing countries the wool returns were also lower than the year before.
- The effect of these developments on the profitability of the farms is however not the same for all countries.

Diverse developments between and within countries

- Profitability is analysed by **comparing** total returns with three cost levels – cash costs (short-term), then adding depreciation (mid-term) and then adding opportunity costs (long-term).
- **Mid-term profitability** was in 2015 lower than the year before in one German farm, three French ones, Ireland and UK, Mexico, Uruguay, China (after a dramatic increase in 2014), three Australian farms, New Zealand, Algeria, one Namibian farm and two of the South African farms.
- Nevertheless, in general most of the sheep enterprises remained profitable in the year 2015.