

DTN Ag Summit

Prospects for Livestock Recovery, December 2012

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Rabobank International

Presentation Outline

Key Points of Delta for Animal Protein Key Drivers for:

Beef

Pork

Chicken





Major Trends in Global Animal Protein Production



GDP growth/meat demand growing

China, India and Indonesia alone represent 40% of world population

... and are all in the "sweet spot" where consumer demand for animal protein grows at an accelerating pace – with GDP between \$3-5000 per year.

While economic growth in Asia may be slowing, it is at very high levels of absolute growth.

Asia is also a grain deficit region – they will need to import grain, or animal protein

Higher GDP growth

Higher protein consumption

Higher grain demand

Country	2011 GDP Growth Rate	2012 Forecast GDP Growth Rate	2013 Forecast GDP Growth Rate	Population
China	9.20%	8.00%	8.40%	1,331,460,000
India	7.13%	6.14%	6.30%	1,155,348,000
Indonesia	6.46%	6.00%	6.35%	229,965,000

Source: Bloomberg, IMF, CIA, 2012



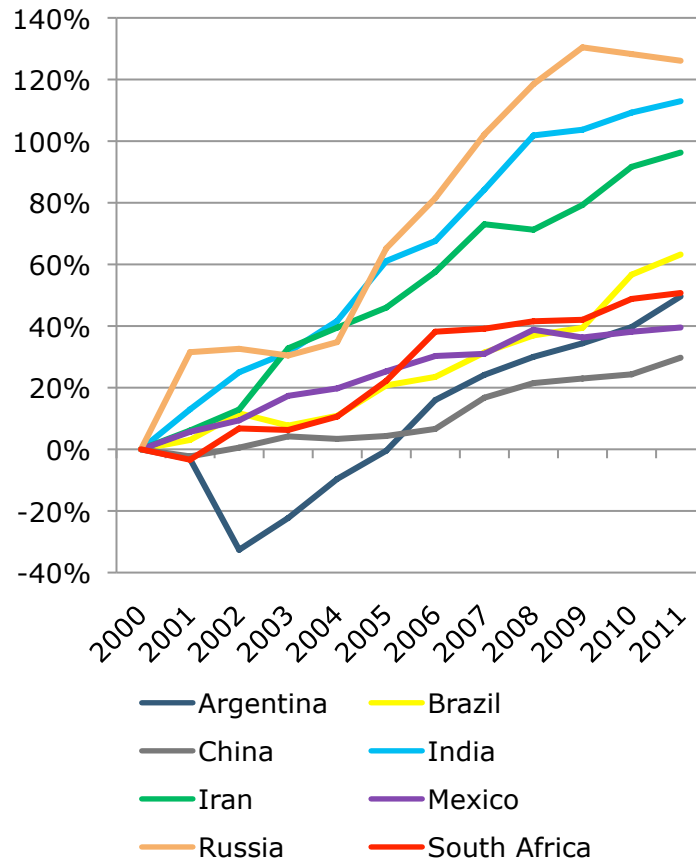
Most of which will come from developing markets

BUT WHICH MOSTLY ARE IN GRAIN DEFICIT REGIONS

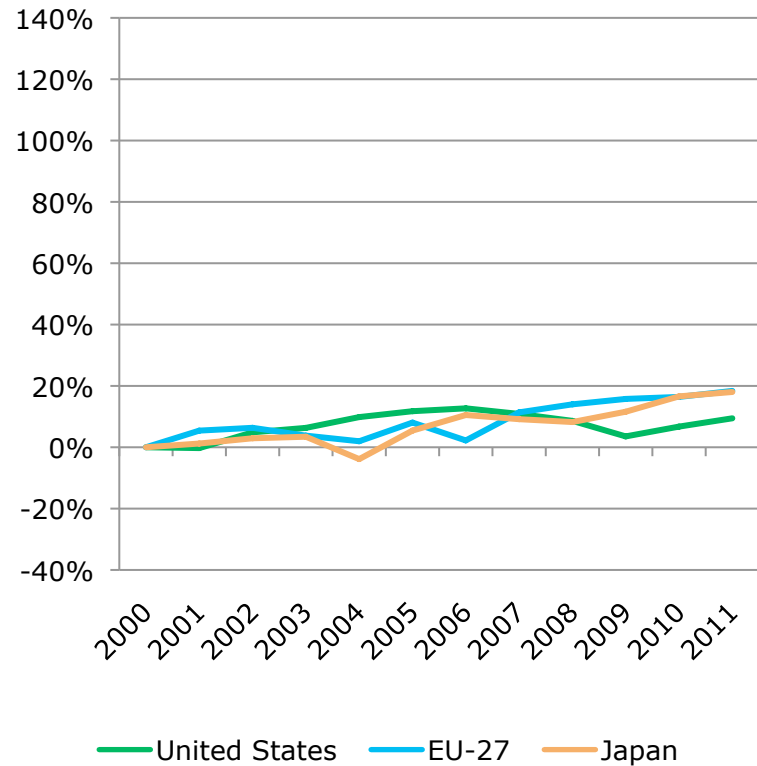
Income growth is fastest in countries with large populations, this is driving demand growth.

The disconnect is that demand growth for meat protein is coming mostly from grain deficit regions – will the demand be served by imports of grain or animal protein?

Poultry Consumption Developing Markets



Developed Markets



Source: USDA, 2011

Source: USDA, 2011



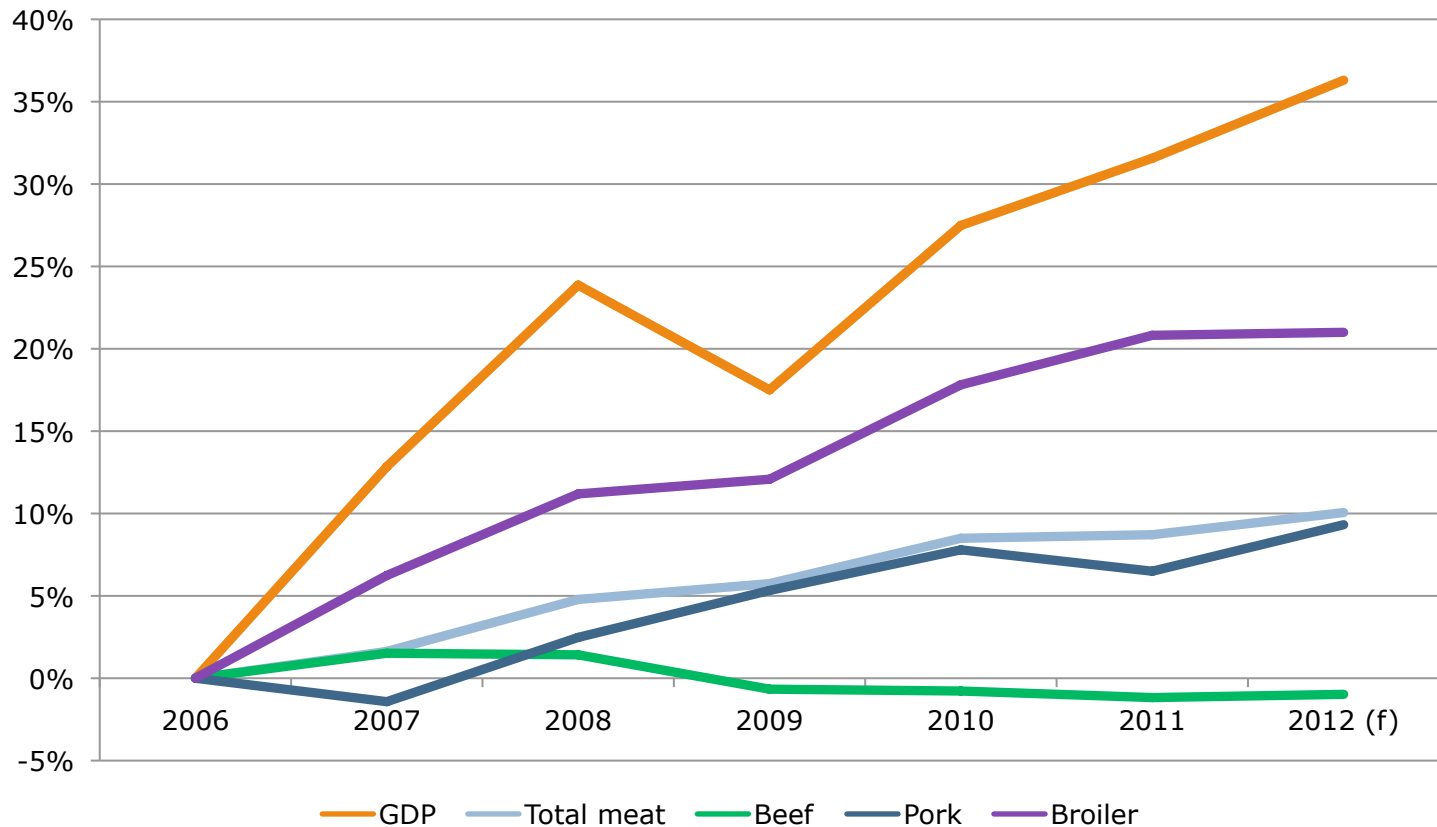
Meat Production < GDP = Higher Meat Prices

Especially that from developing markets

World GDP growth continues to outpace animal protein production growth – so demand is outstripping supply which leads to high meat prices.

Animal protein production is adapting to structurally higher and more volatile grain prices. Given the lag factor caused by animal life-cycles, this process will take time.

The shorter life cycle for poultry, in addition to feed conversion advantages, provides a relative advantage to other proteins.



Sources: World Bank for GDP data and forecast, USDA for meat production, Rabobank for meat production forecast

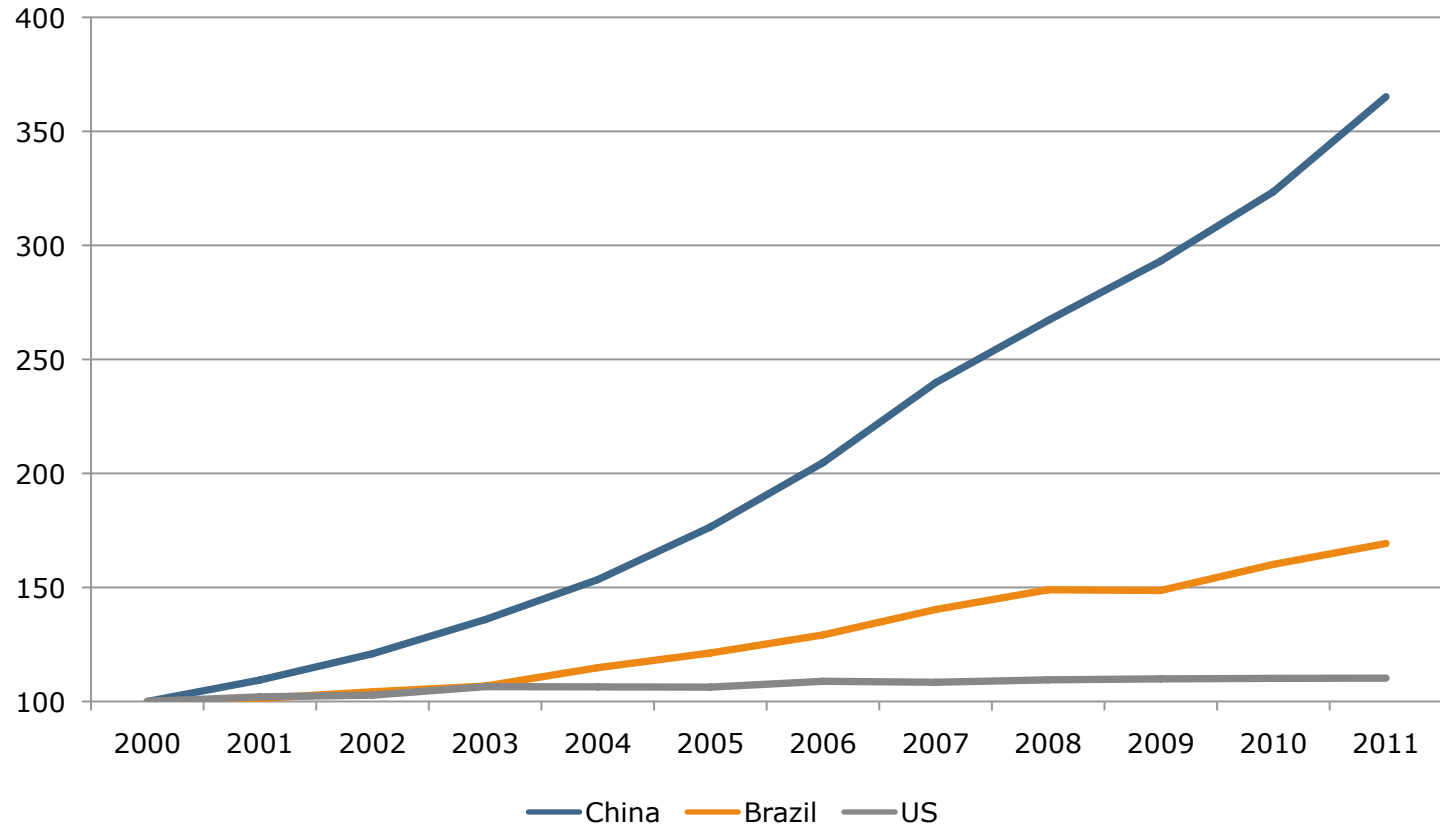


Labor: US improving relative cost competitiveness

Brazil, China and US Real Wage Index

U.S. wage costs have barely budged over the last decade, while costs for Brazil are up 70% and up over 350% in China.

The relative disadvantage of US based production is diminishing.

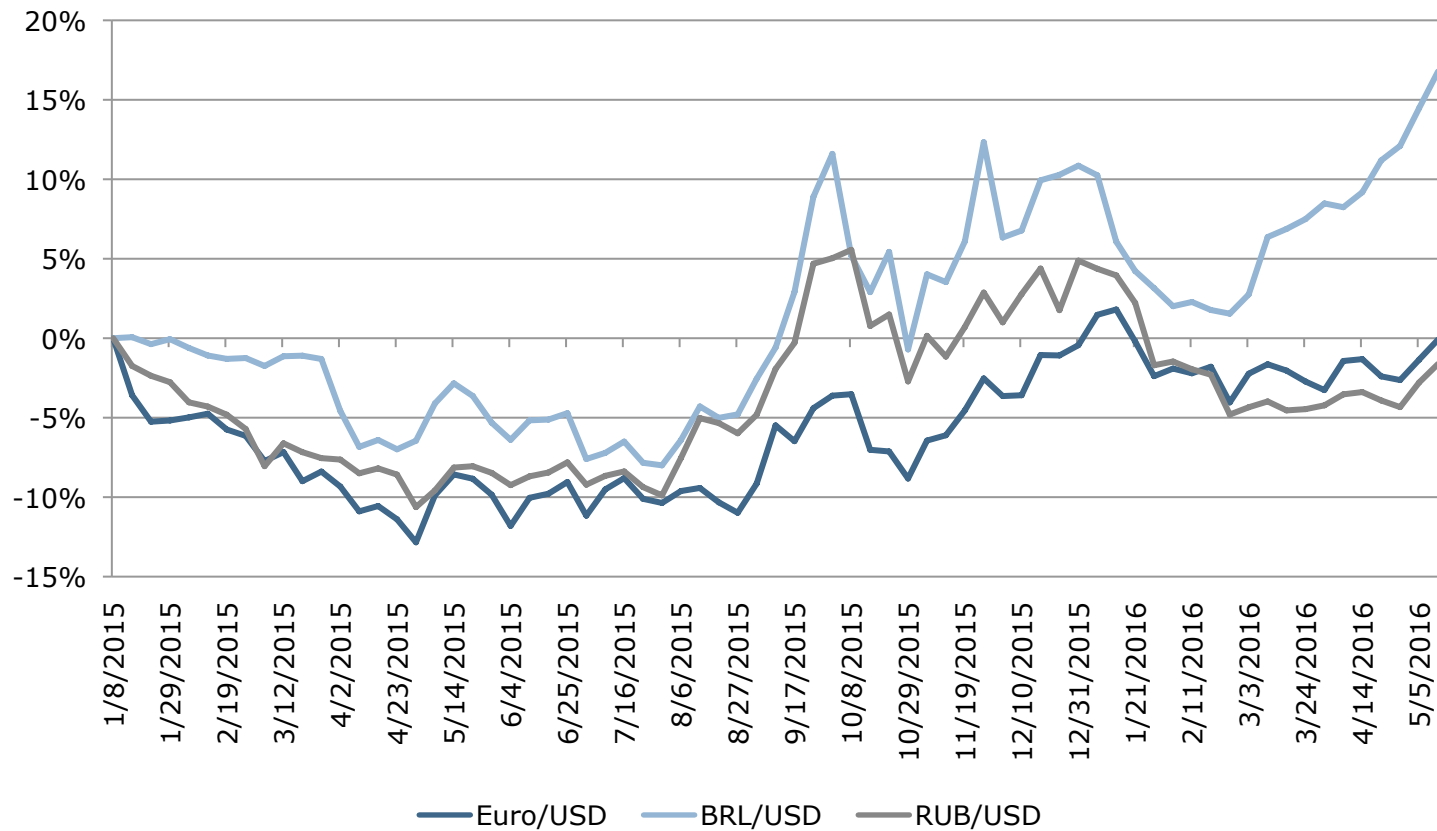


Source: IBGE, BLS, Bloomberg, 2012



But big swings in currency affect competitiveness

It's not just about feed costs and conversions anymore



Source: Bloomberg, 2012



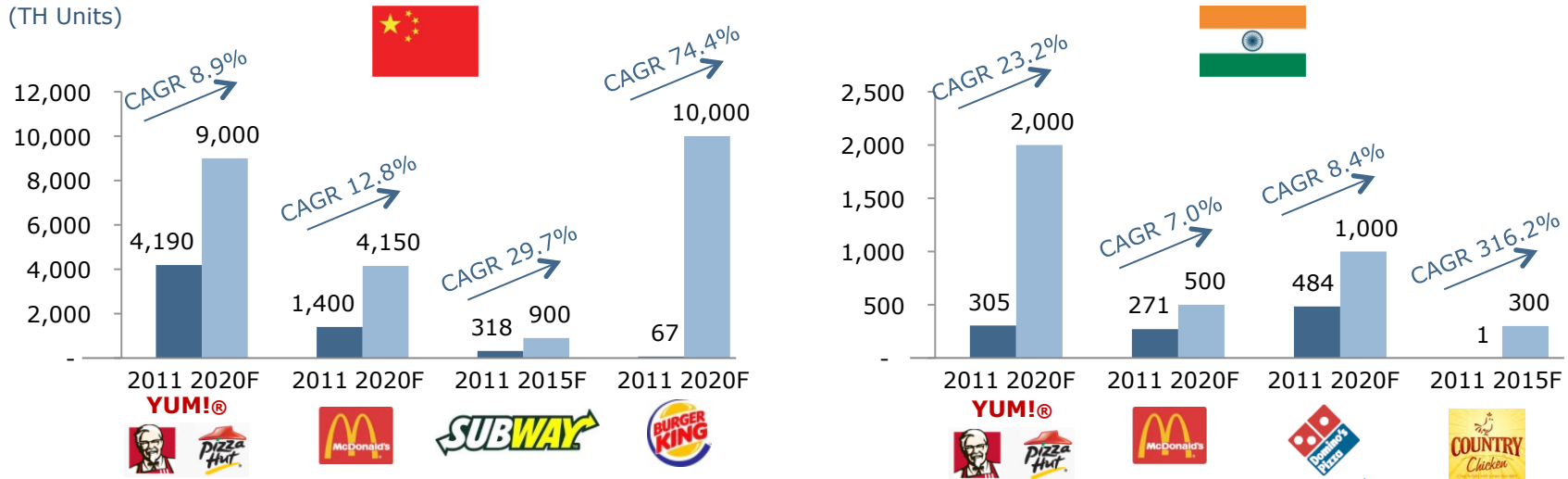
Key elements affecting poultry markets

QSR growth in developing markets, particularly in China and India

- QSR penetration in India is currently much lower than in China, but with high growth potential
- QSR chains underestimated supply chain challenges. Will they pay for security? Other 20%?
- Hard to assemble land, labor costs rising, bio-security big issue
- Poultry companies need boots on the ground to understand local dynamics

China and India QSR outlets¹

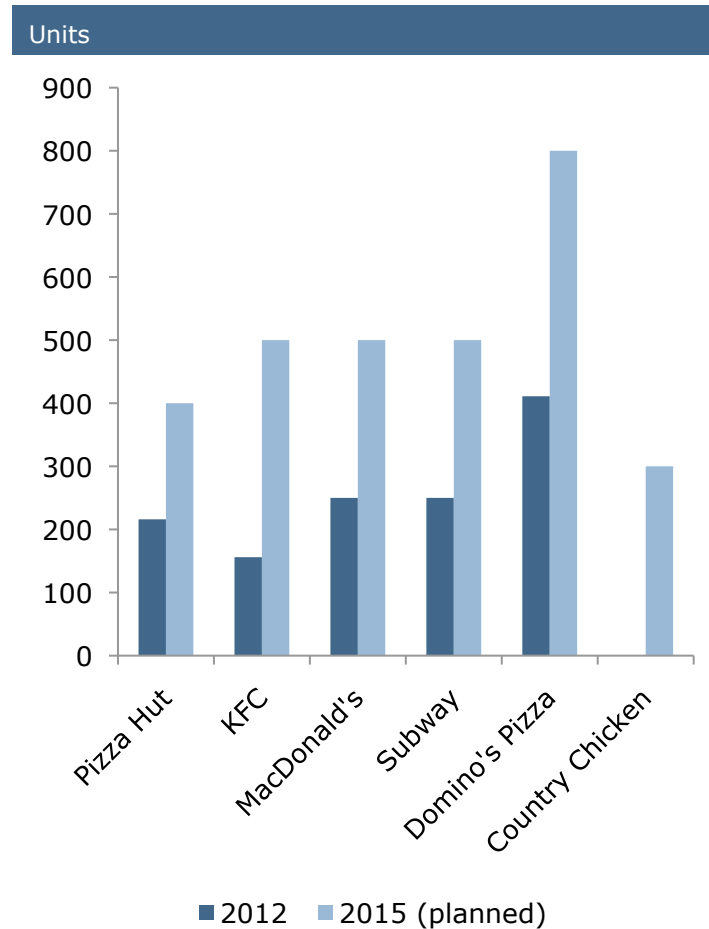
(TH Units)



Source: Company filings, Annual Reports and Investor Presentations
 1. 2011 figures represent the latest available data reported
 2. McDonald's figures estimated based on historical performance and guidance from available press releases

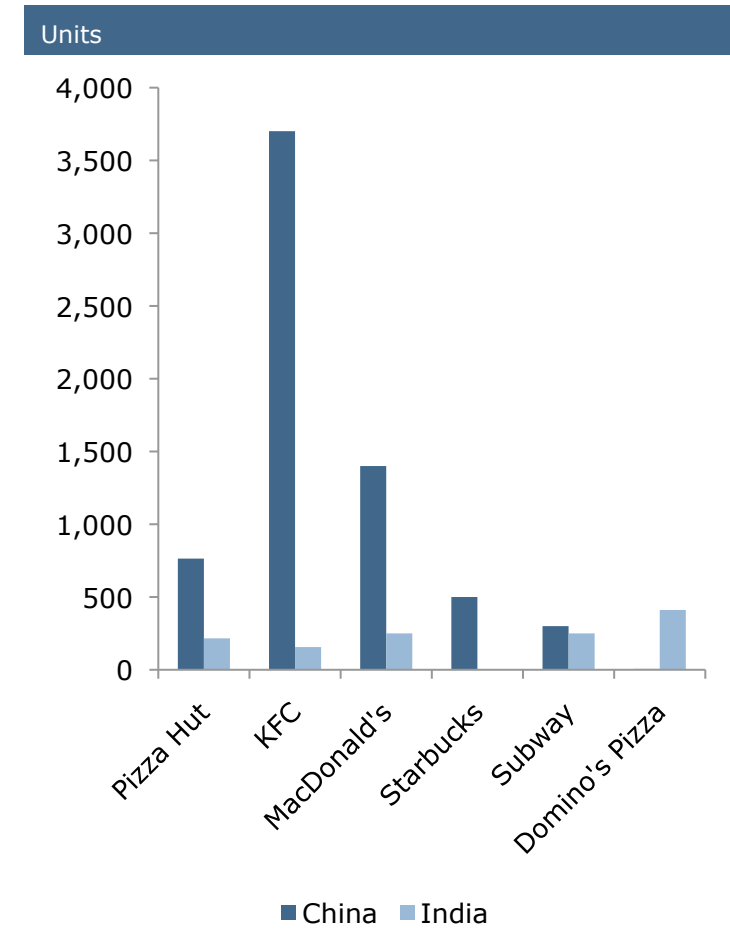
Bigger potential, but from smaller base in India

Indian QSR Outlets



Source: Industry estimates, 2012

India vs. China QSR Outlets



Source: Industry estimates, 2012



Global Perspectives

Beef



Beef summary

US: Overall production to decline, likely high single digits

Key swing factors include:

rain

imports (Mexico)

weights

dairy

EU: Policy will shift and reduce production in coming years

**Brazil: Still increasing production
but not expanding the herd**

Australia: Modest growth

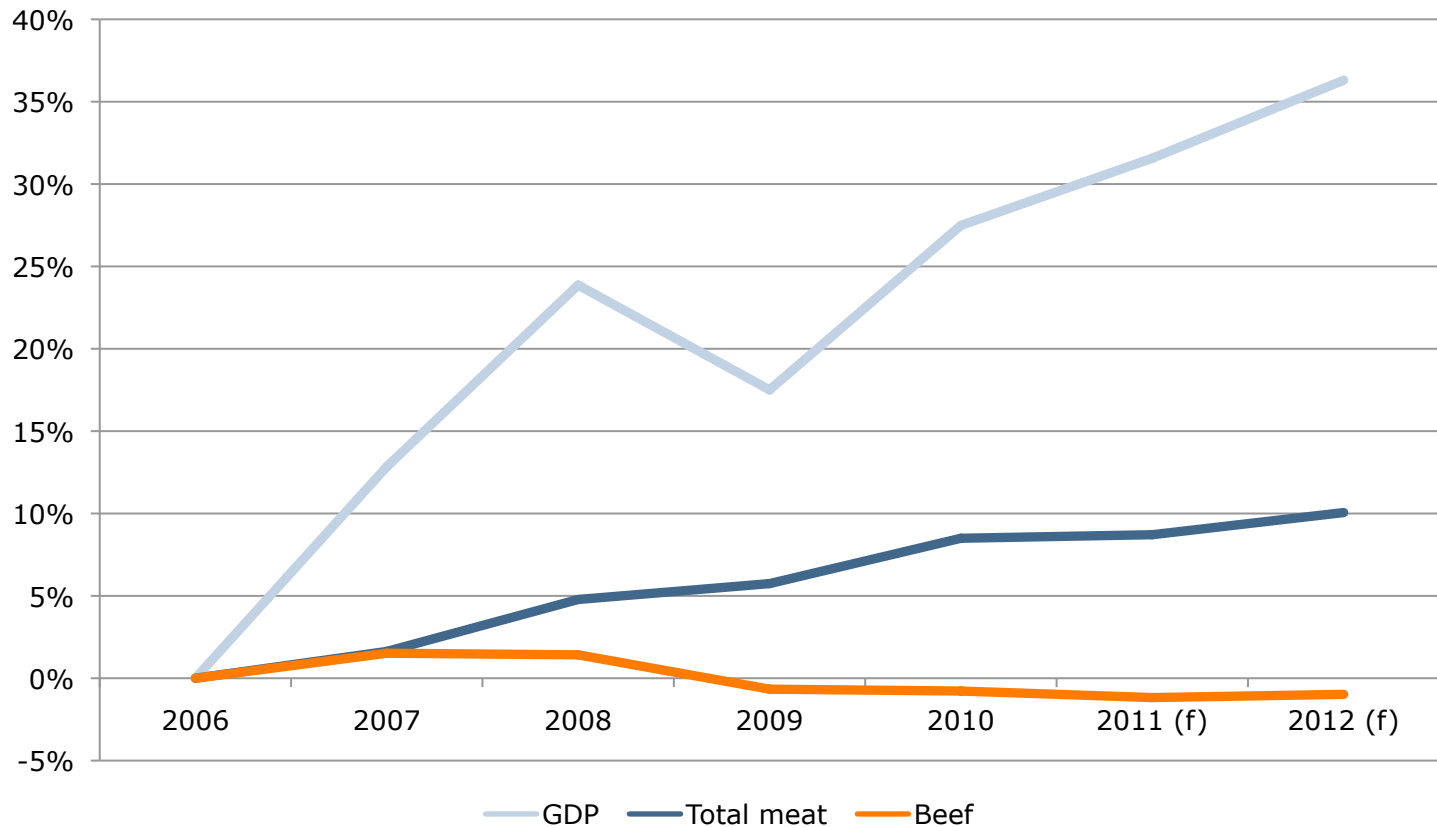
India: Big growth to continue, but will eventually slow



World Beef Production

Land that has been in beef pasture is finding higher and better use

Protein production is not keeping up with global GDP growth. This is good for pricing and the industry.



Sources: World Bank for GDP data and forecast, USDA for meat production, Rabobank for meat production forecast



World beef output stagnant at best

Beef Production, 1,000 mt

The big picture is that land used for beef pasture is finding higher and better uses. This is dairy and many countries. In Brazil pasture land continues to shift toward crop production.

	2007	2008	2009	2010	2011	2012	2013f
United States	12,097	12,163	11,891	12,047	11,997	11,469	10,500
Brazil	9,303	9,024	8,935	9,115	9,030	9,644	10,000
EU-27	8,188	8,090	7,700	7,900	7,800	7,500	7,300
India	2,413	2,552	2,514	2,842	3,170	3,505	4150
Argentina	3,300	3,150	3,380	2,620	2,530	2,580	2700
Australia	2,172	2,159	2,129	2,087	2,150	2,200	2280
World	58,438	58,382	57,182	57,117	56,888	57,001	56500

Source: USDA, Rabobank forecasts, 2012, 2013



Beef

United States



US beef production to fall 3-9% in 2013

US Beef Production, million lbs

Swing factors for 2013:

*Rain
Weights*

*Mexican imports
Heifer retention*

USDA forecasting 3.9% decline in US beef production for 2013. Rabobank believes it could be closer to 10%.

Key issue is moisture

	2010	2011	2012	2013	YoY % change
Q1	6,248	6,411	6,283	6,075	-3.3%
Q2	6,547	6,559	6,475	6,255	-3.4%
Q3	6,768	6,735	6,584	6,220	-4.5%
Q4	6,741	6,490	6,245	5,970	-4.4%
Total	26,304	26,195	25,587	24,630	-4.2%

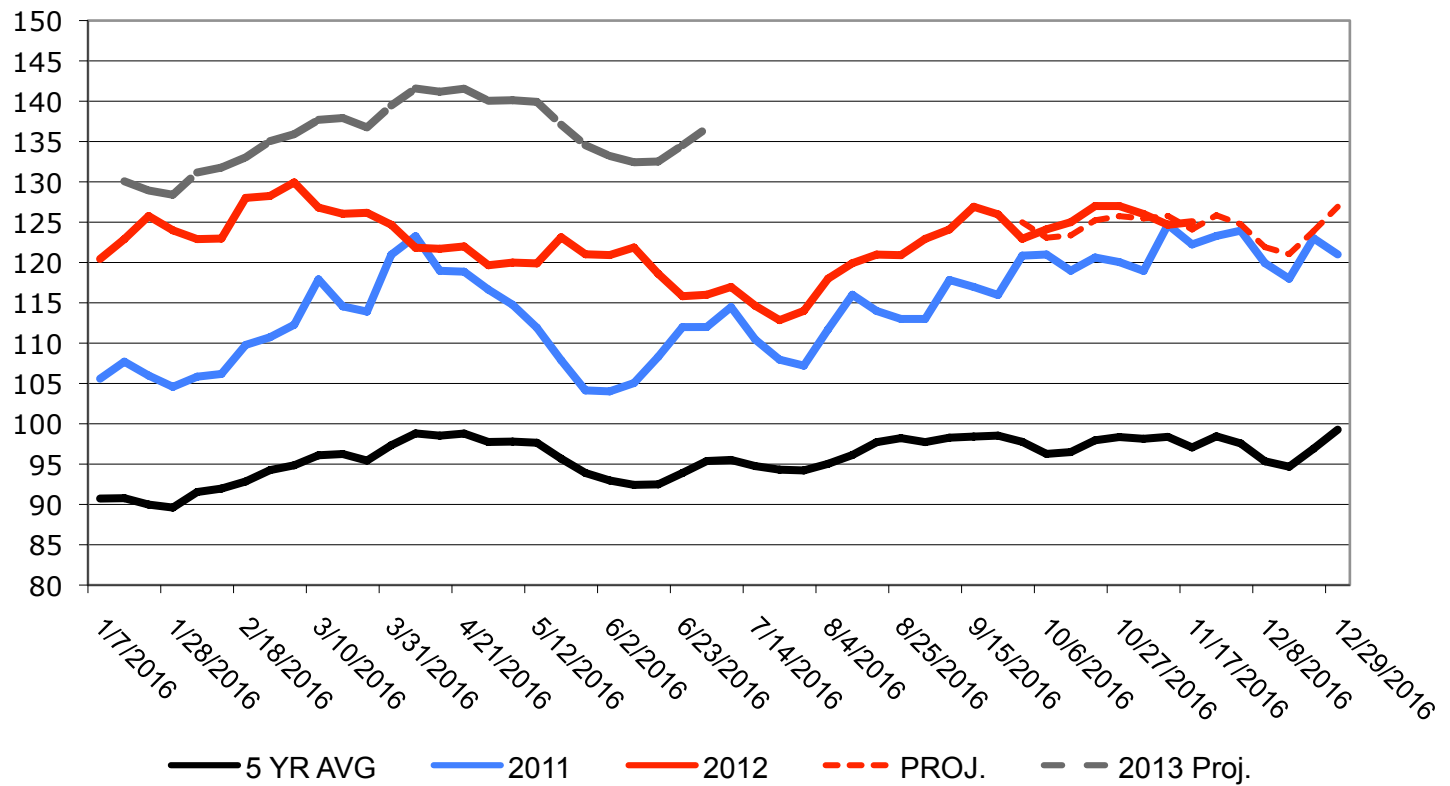
Source: USDA, 2012



Rabobank Steer Price Forecast

Western Kansas Steer Price

USD/cwt



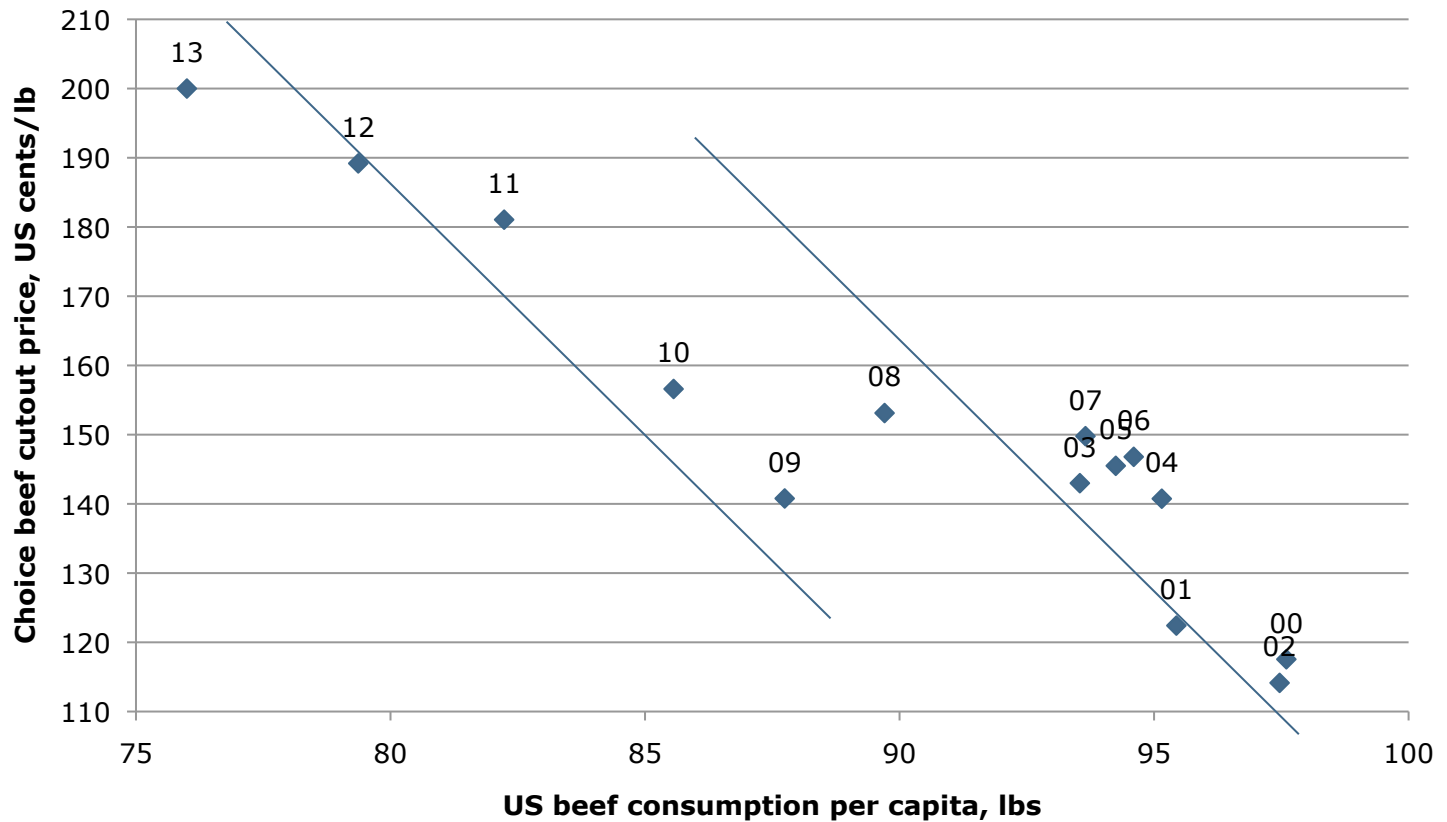
Source: USDA, Rabobank forecast, 2012



US beef demand curve has shifted in

Consumers paying up for beef, but in less quantity

In the US, beef demand has declined



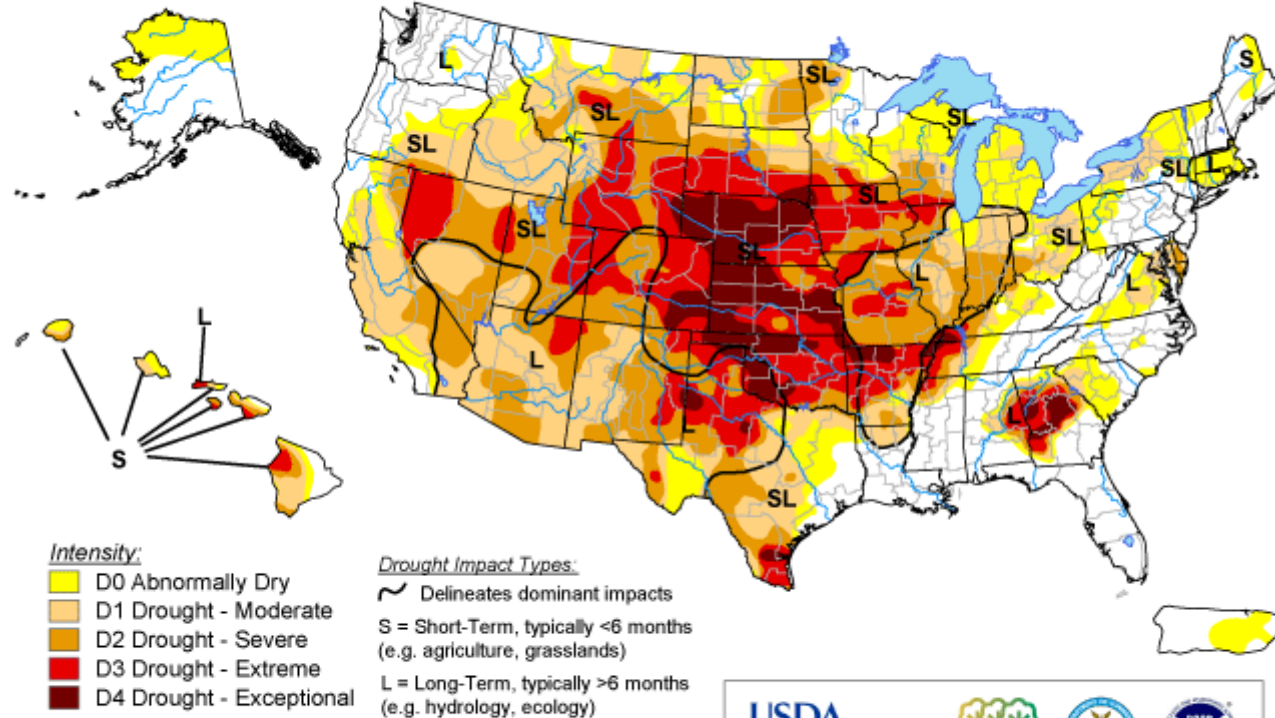
Source: Bloomberg, Rabobank, 2012



“If it rains”

U.S. Drought Monitor

September 4, 2012
Valid 7 a.m. EDT



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, September 6, 2012

Author: Brian Fuchs, National Drought Mitigation Center



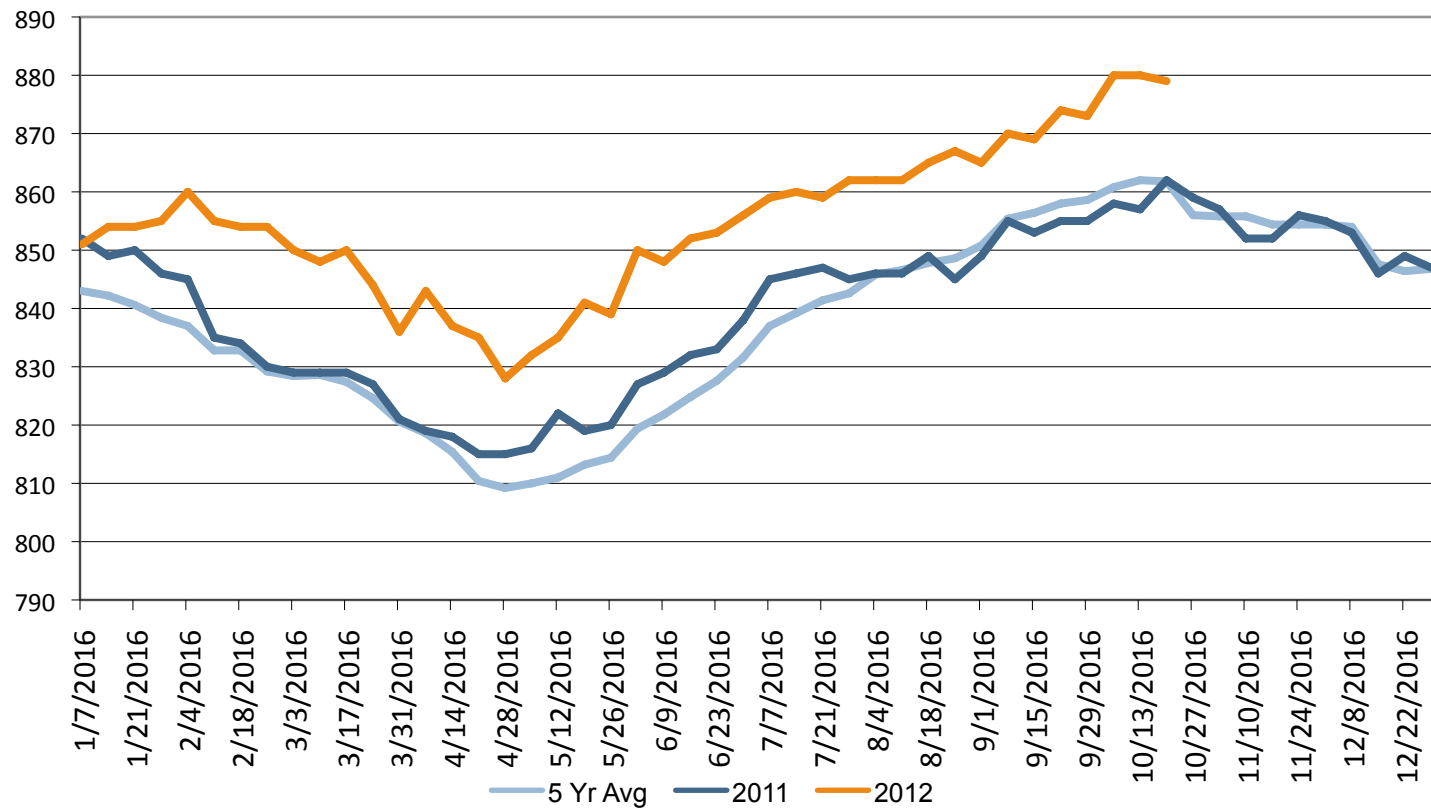
Heavier weights have helped maintain production

Average Steer Carcass Weight

Lbs

Beta-agonists have contributed to increased slaughter weights over the last year.

Overall beef production is only down 2% YOY.



Source: USDA, 2012



The US situation: reduced beef cow slaughter...

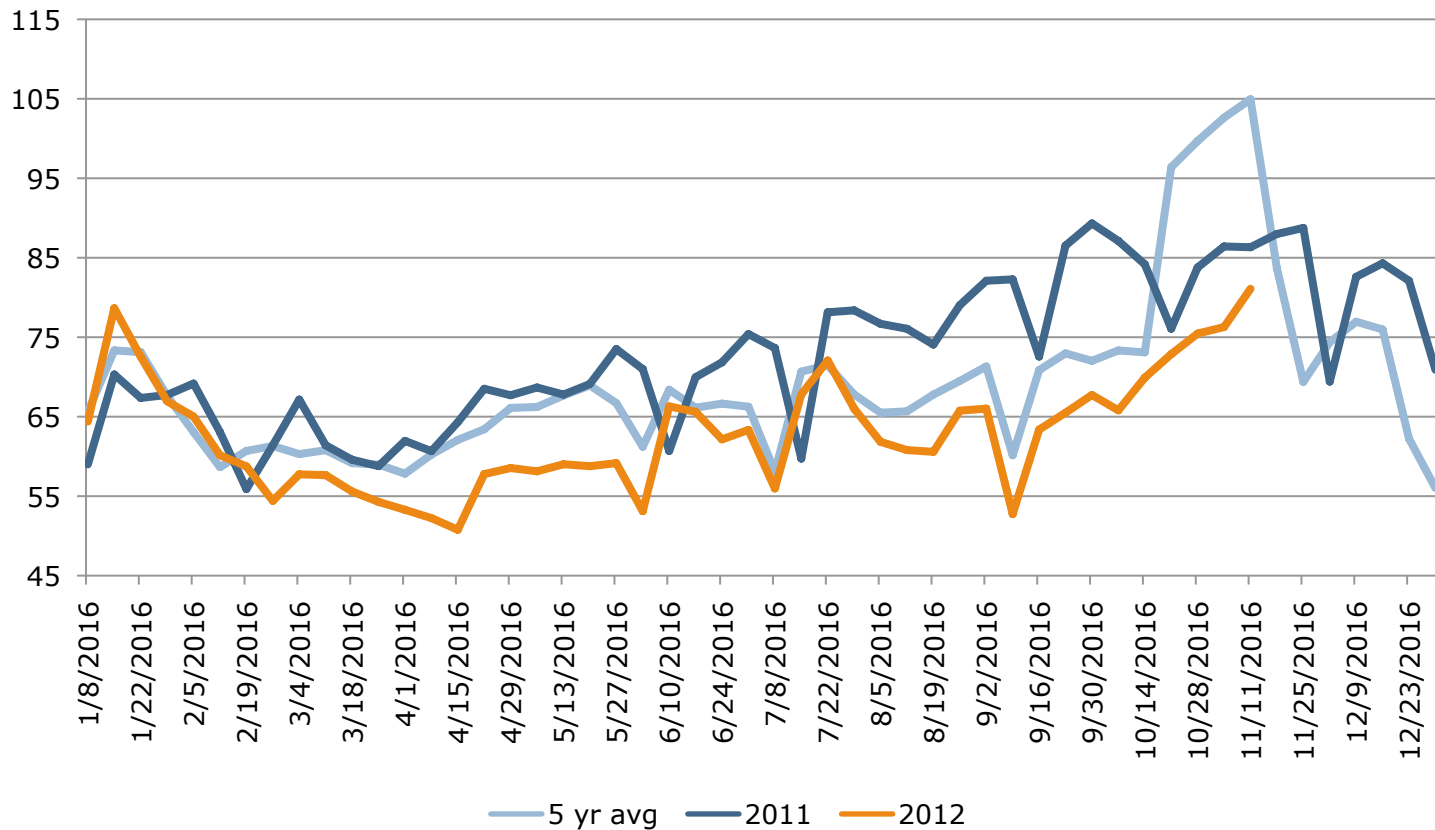
Beef Cow Slaughter

1,000 head

Liquidation likely to be less than expected as cow-calf margins remain strongest segment in beef supply chain.

Poor 12/13 corn crop means increase in corn cut for silage, making feed availability better than consensus expectation.

However, very little expansion is expected longer term as domestic consumption stagnates and volatile input prices favor proteins with shorter life cycles.

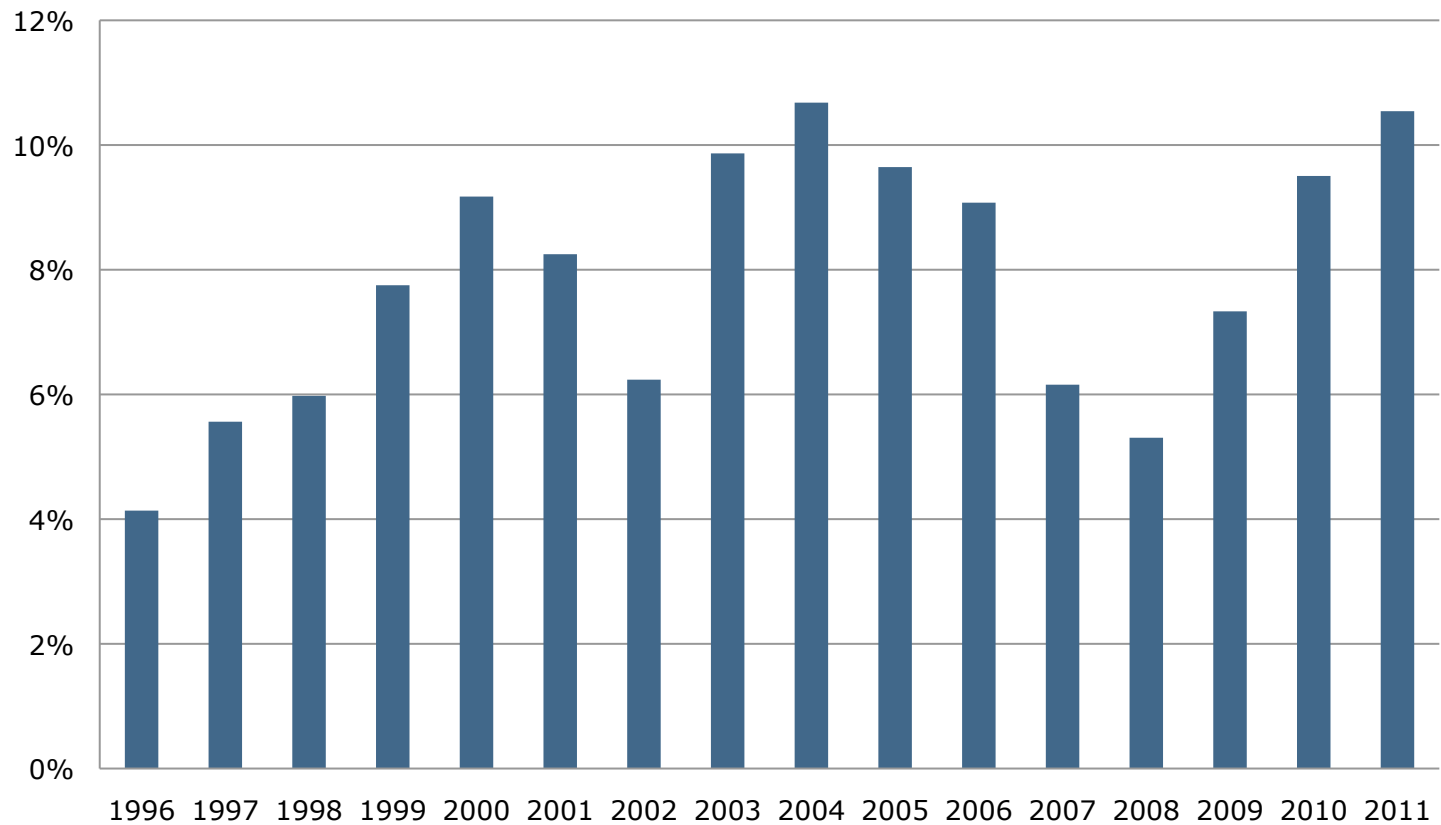


Source: USDA, 2012



Mexico an important source of US feeder cattle

Mexican Imports As A Percent of U.S. COF

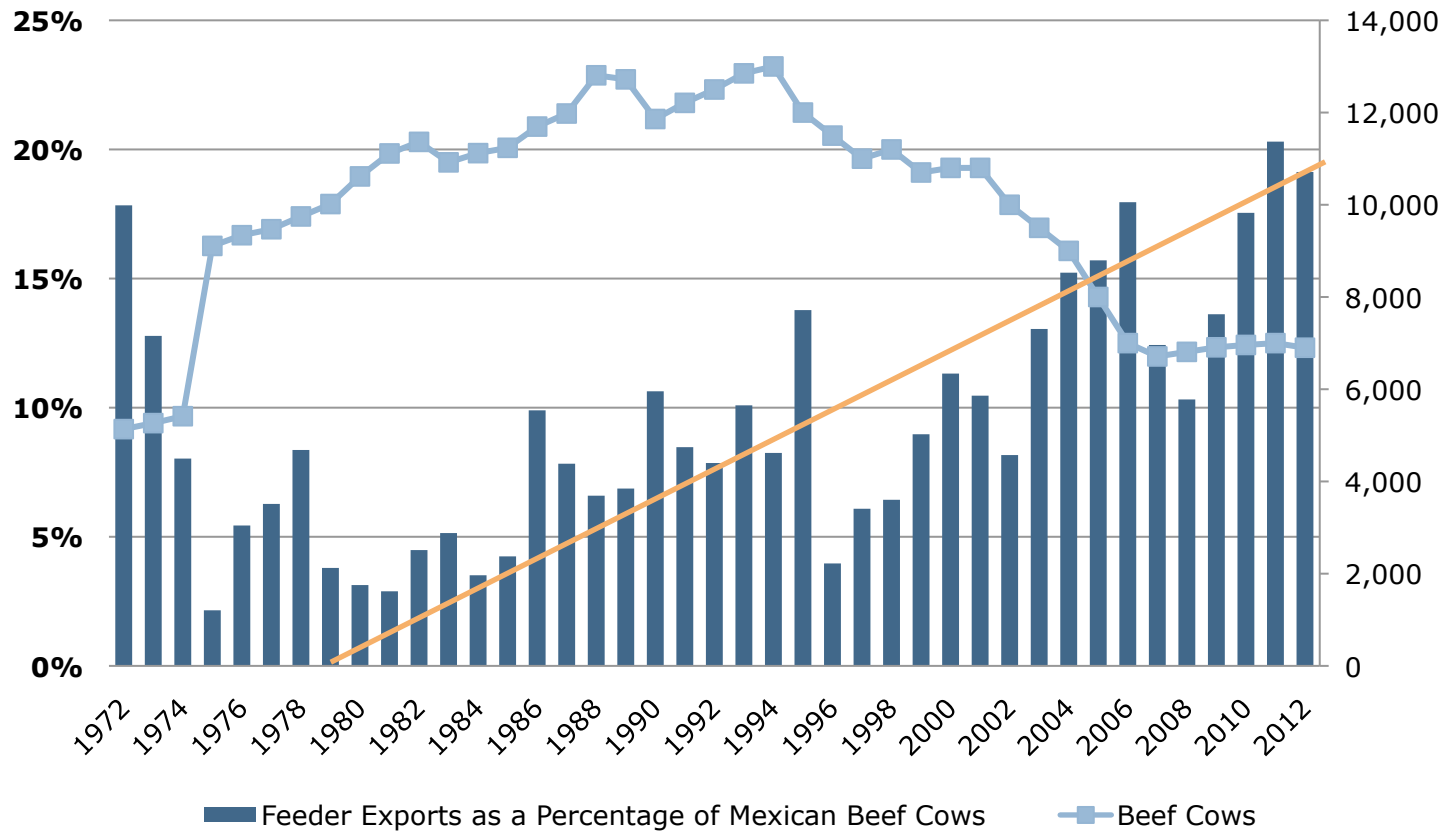


Source: USDA, 2012



...but imports have been unsustainable

Mexican Feeder Exports as a Percentage of Mexican Beef Cows



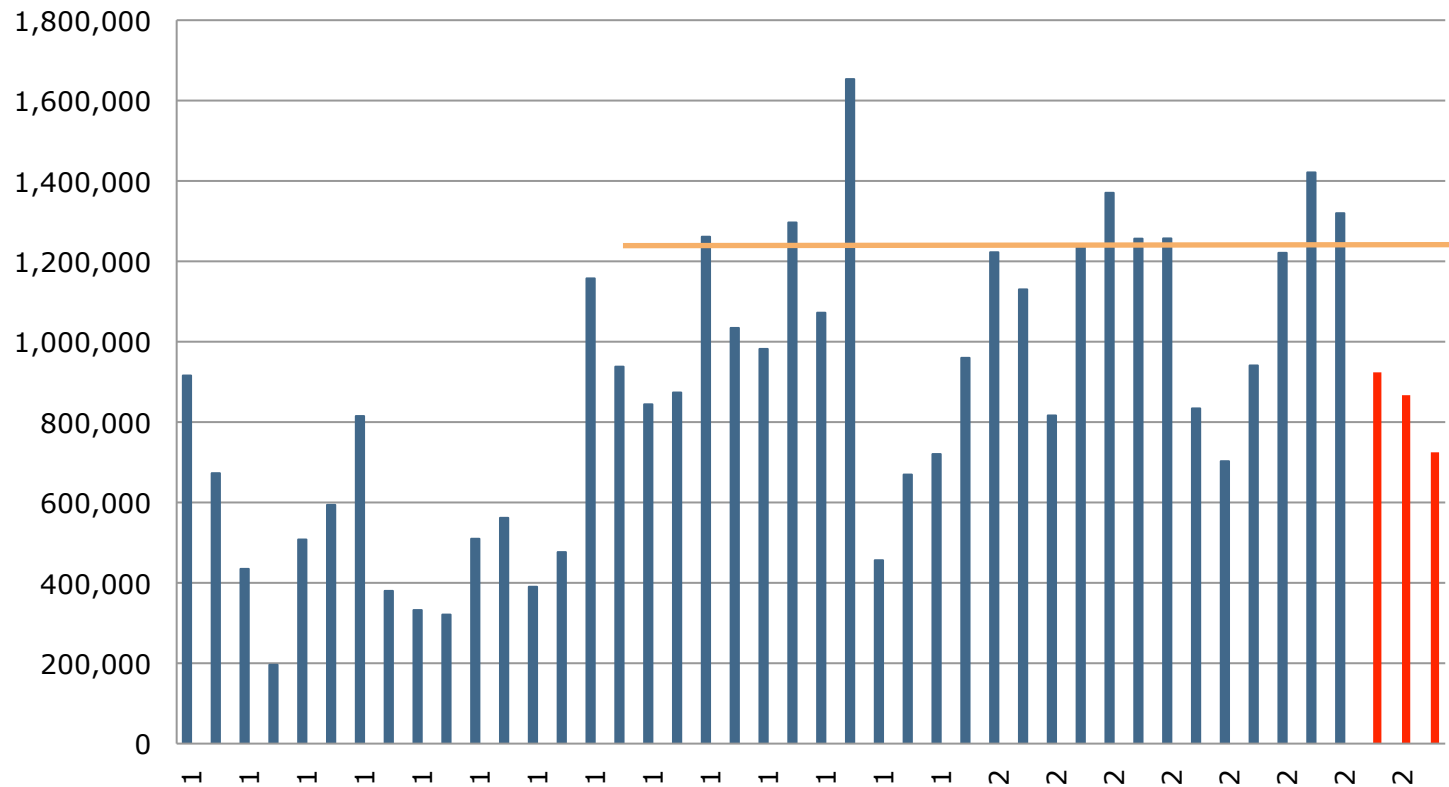
Source: USDA, 2012



Import decline to reduce US supplies by 2+%

Mexican Feeder Cattle Imports

Head



Source: USDA, 2012



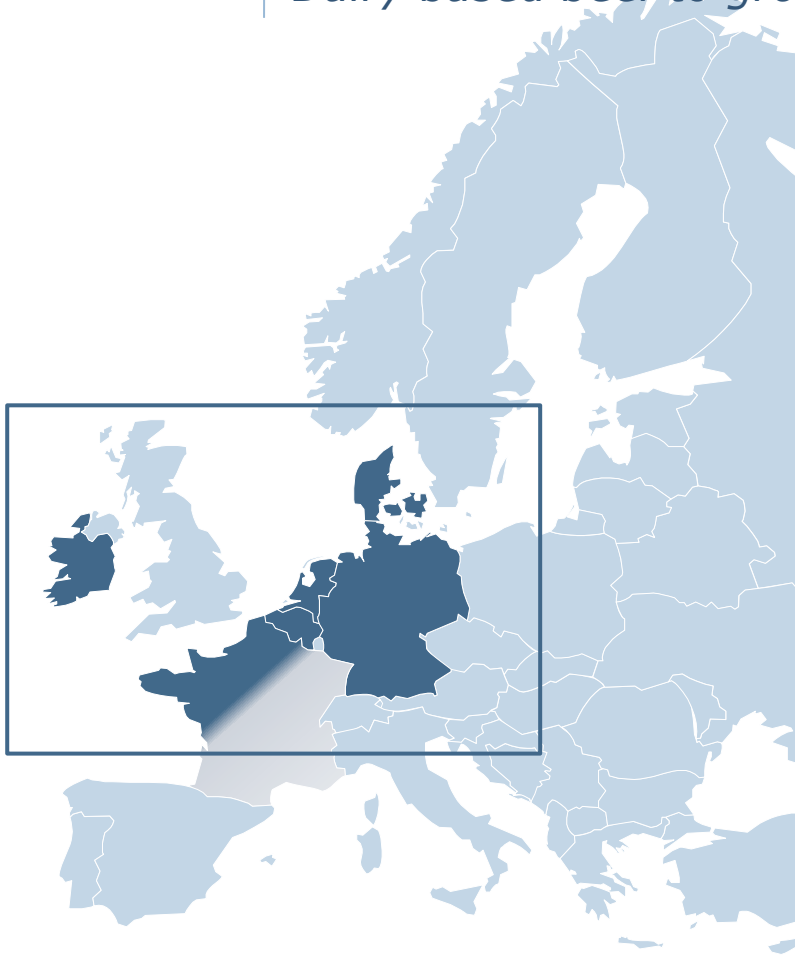
Beef

Europe



Beef: Dairy quota abolition to relocate beef production, impact on volume limited

Dairy based beef to grow at the expense of 'quality beef supply



EU dairy quota abolition 2015

- Dairy production and dairy based beef to grow in countries currently restricted by dairy quota
 - Ireland,
 - Denmark,
 - the Netherlands,
 - Germany,
 - Belgium,
 - some regions in France
- 'Quality' Beef production to relocate to southern Europe
- Wildcards are:
 - Global dairy price 2015 which might delay grow dairy production
 - Competition for land
 - Impact CAP 2014-2020

Beef

Brazil



Brazilian Beef Opportunities

Exports growing at an annual rate of 6% (average) in the period

Per capita consumption slowing down and increasing at an annual rate of 1%

Where could we be wrong?

Upside

-Exports may accelerate if part of the projected corn supply surplus is directed to poultry production

-Further acceleration of per capita consumption growth

Downside

-Deceleration of the world economic growth

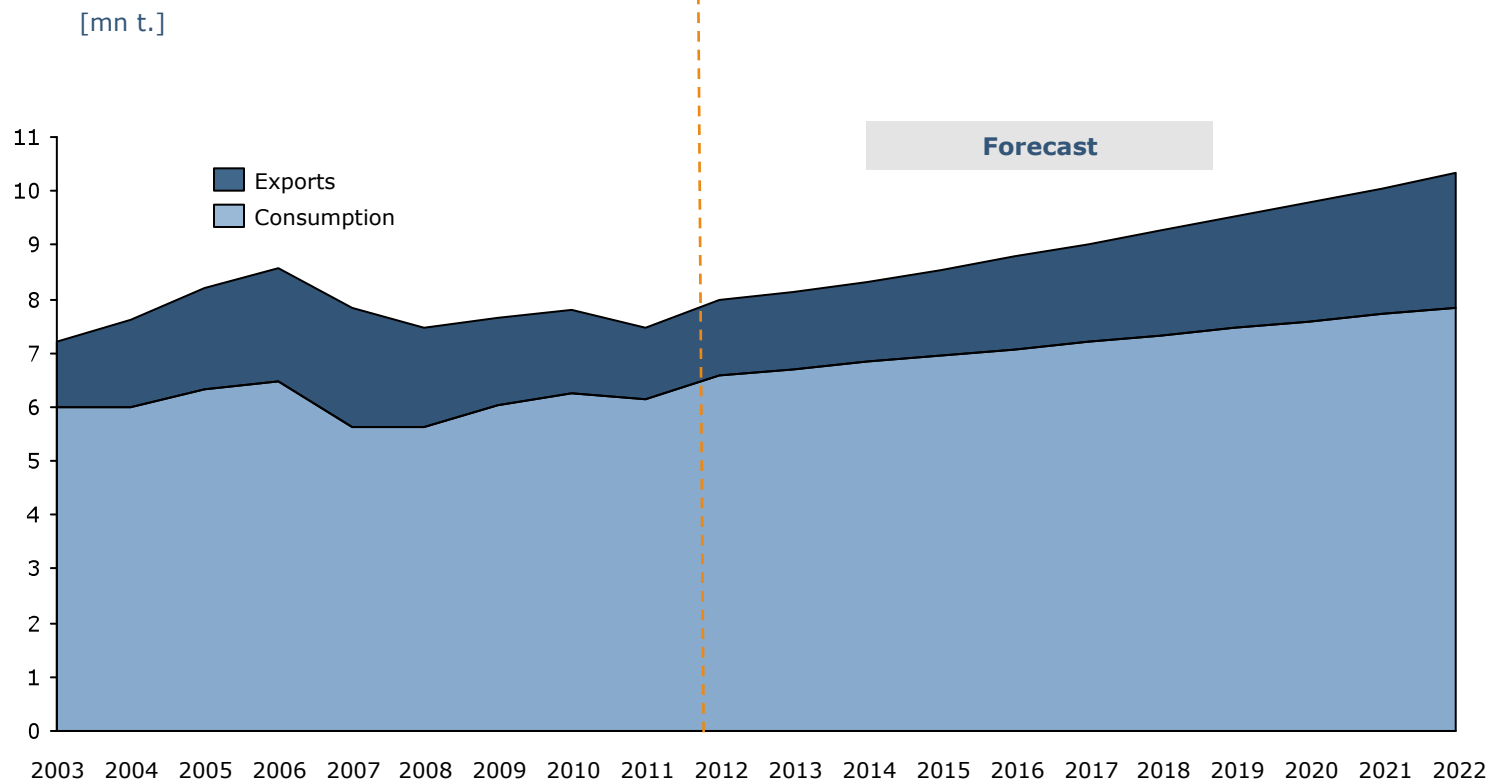
-Disease outbreak/ trade barriers

-Civil war in Mena

- Population growing at a lower rate

Brazilian beef exports are expected to take off in the coming years

Beef domestic consumption and exports



Source: UBABEF, Informa Economics, Raboban estimates



Threats

These obstacles are placed in several forms

Technical Barriers

■ No recognition of the "regionalisation" principle
(South Korea, Indonesia, Mexico, Canada, *Japan & The US*)

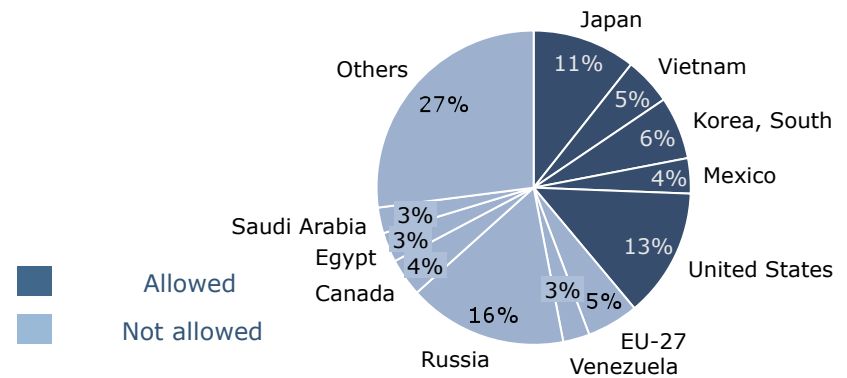
- Russia
- EU – Lista Trace
- Ractopamine, Ivermectine (China, EU, The US etc)

Tax barriers

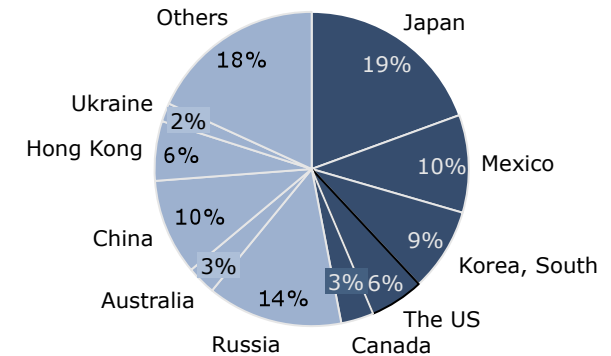
- Multilateral vs. Bilateral trade agreements

Brazil does not access 39% and 47% of the total beef and pork international market, respectively.

World beef imports



World pork exports



Source: ABIEC, ABIPECS, UBABEF, Icone, USDA

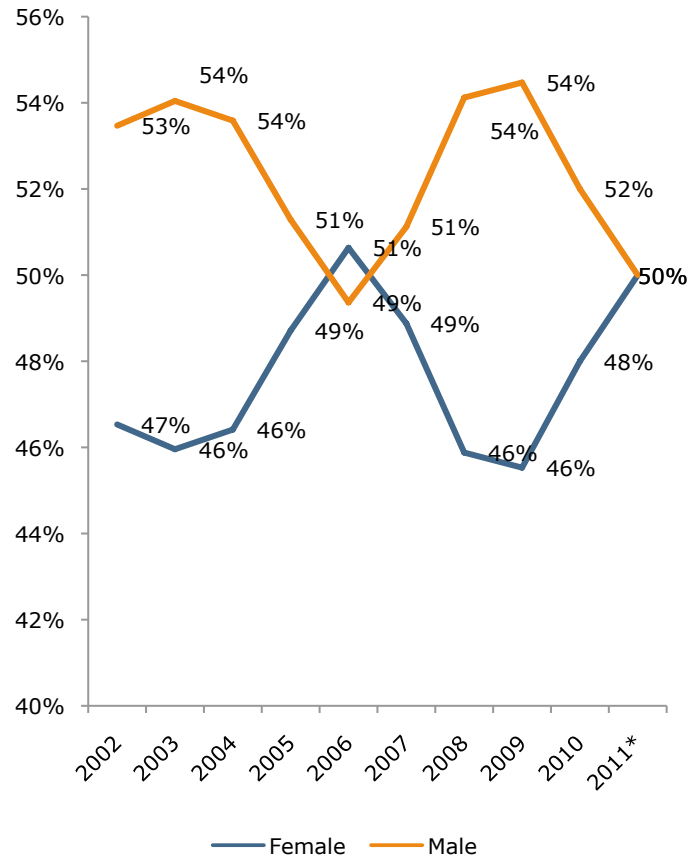


Brazilian Cattle

Brazilian Slaughter by Gender

Heifer retention from 2008-9 is resulting in larger calf crops and increased beef production for Brazil. This helps with capacity utilization. The outlook for the Brazilian beef industry is favorable for the next several years – especially with the recent devaluation of the Real relative to the US\$.

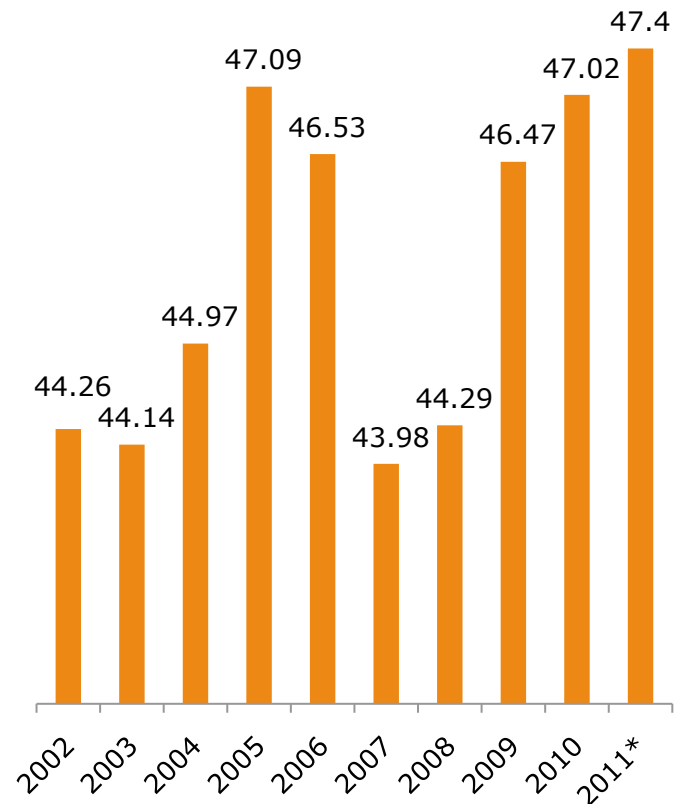
Percent



Source: Informa – FNP, 2012

Brazilian Calf Crop

Million head



Source: Informa – FNP, 2012

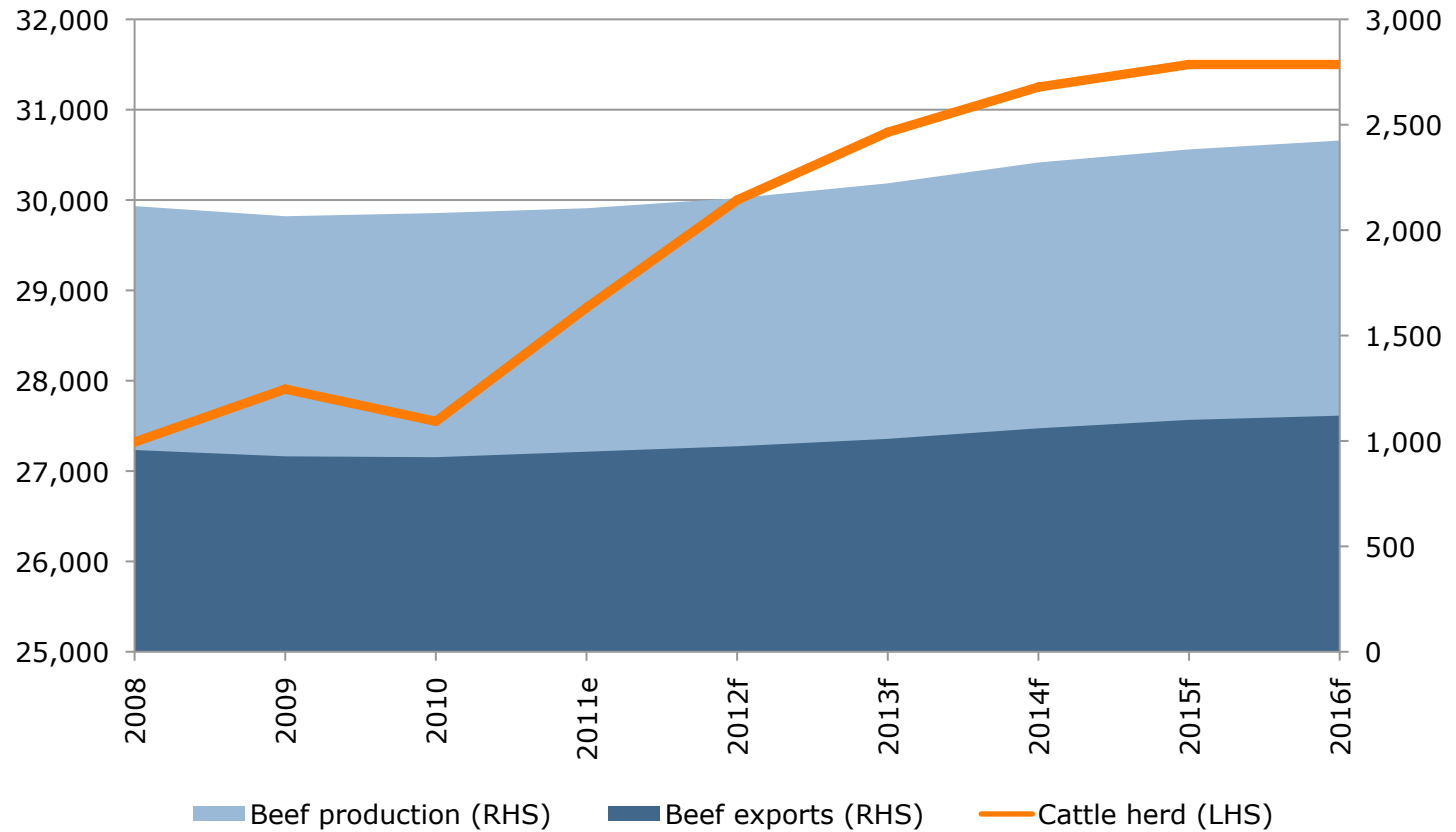


Australia

Australian Cattle and Beef

After several years of drought impacted production, volume in Australia is starting to rise in 2012 – and should continue to increase for the next several years – weather permitting.

Cattle herd in 1,000 head, beef in 1,000 metric tonnes



Source: MLA, 2012

Note: Beef Production in carcass weight equivalent, exports in shipped weight



Beef

India



Indian Beef

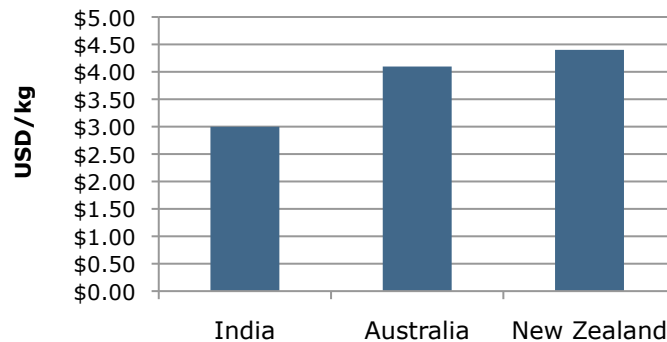
India has become a much bigger player in global protein markets as an exporter of buffalo meat from their dairy industry.

The price is competitive relative to beef from Australia and New Zealand – but is not a comparable product.

We believe exports will continue to be strong for the next several years, then slow and potentially move toward net liquidation.

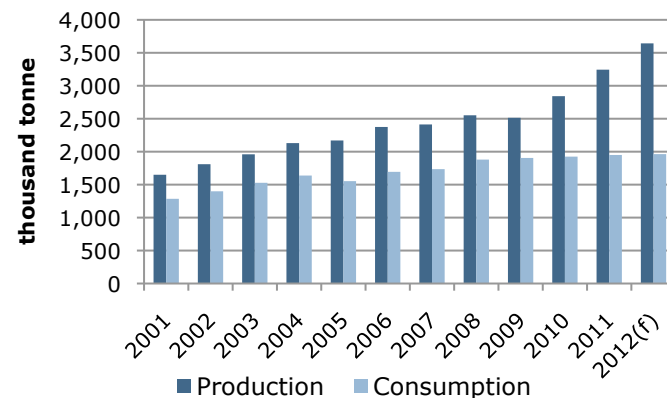
Exporters of this product are quite consolidated.

Landed Price of Beef Imports in Malaysia



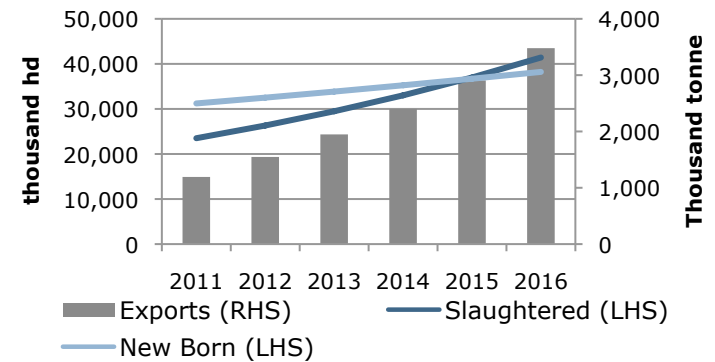
Source: UN Comtrade, 2011

Indian Bovine Meat Production and Consumption



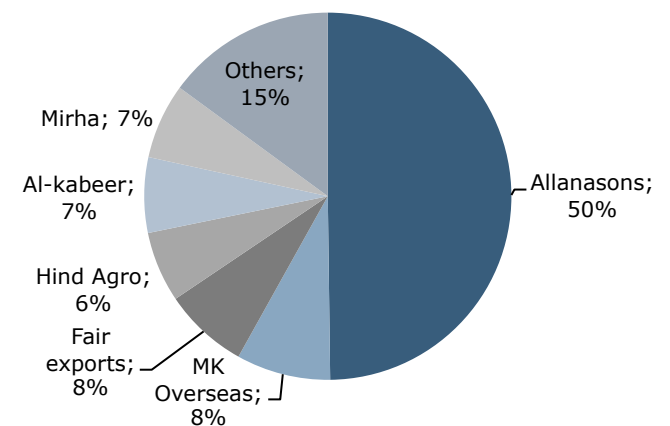
Source: USDA, 2012

Indian Buffalo Supply and Slaughter



Source: USDA, Rabobank, 2012

Key Indian Exporters



Source: Rabobank estimates, 2012



Global Perspectives

Hogs and Pork



Key points of Delta in Pork Markets

Liquidation in Europe

China?

US situation



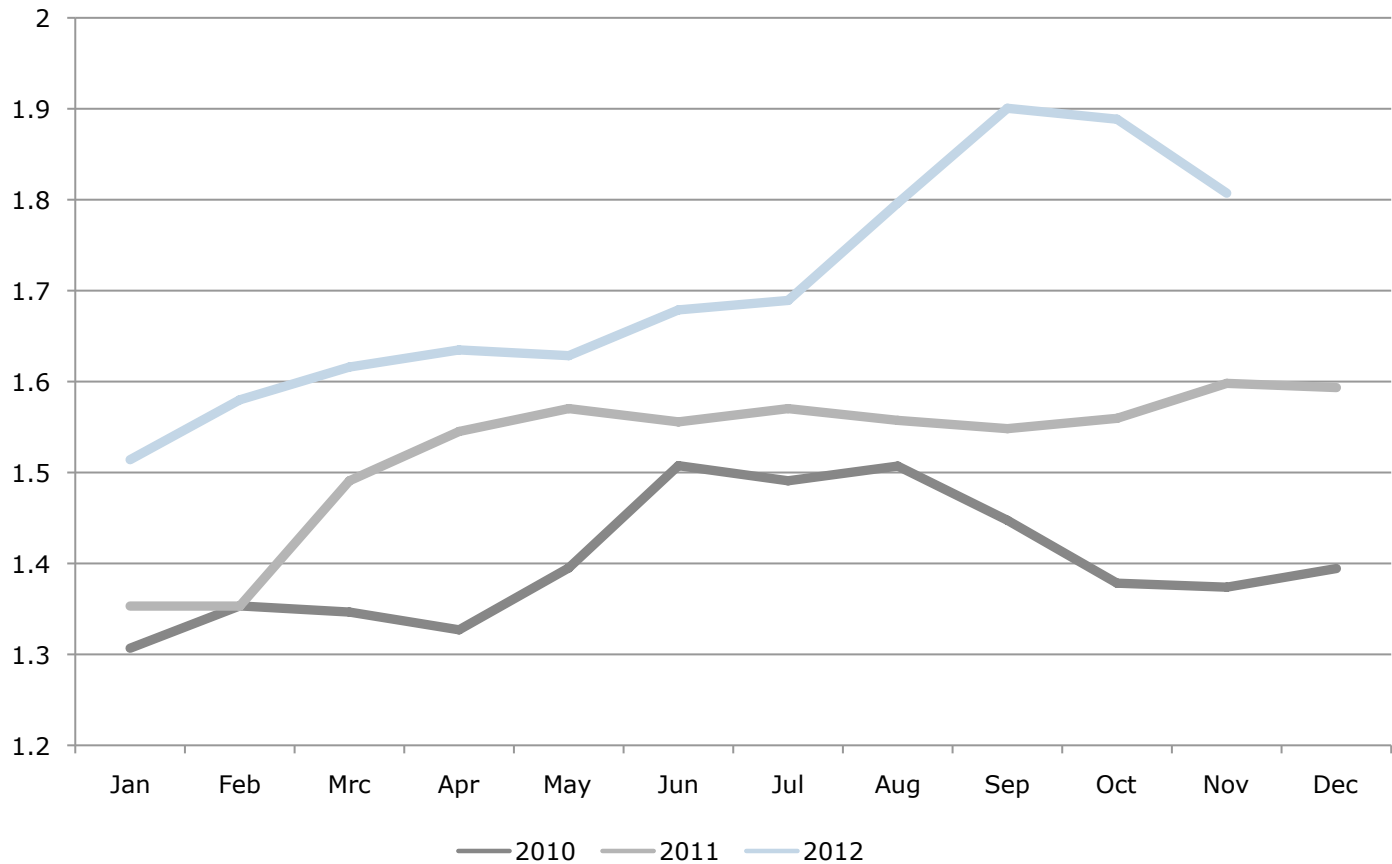
Prices in Europe reflecting liquidation

EU Average Pig Price

Hog production economics have been poor for four years in a row.

A ban on sow crates comes into effect in 2013 which is exacerbating liquidation.

EUR/kg



Source: Rabobank, 2012



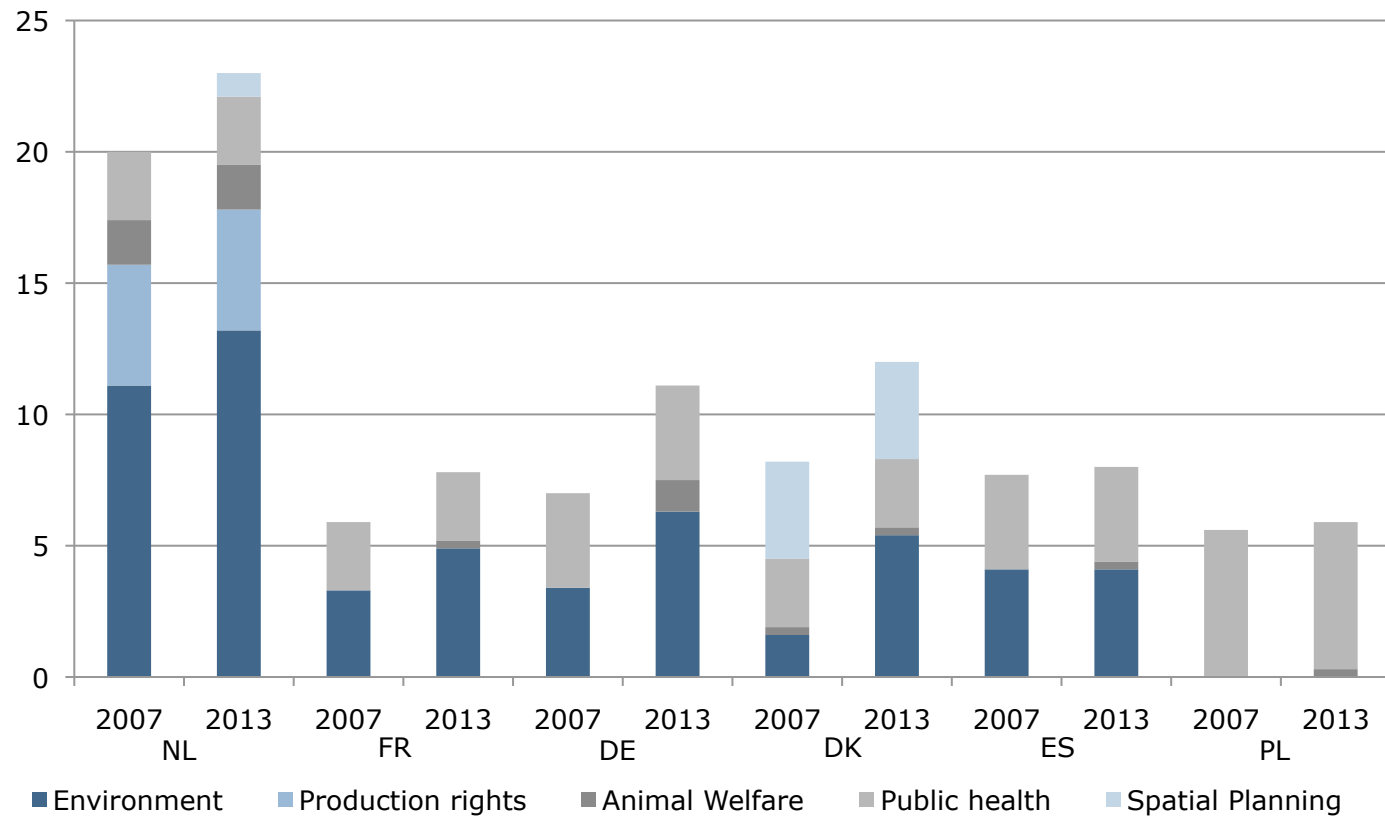
Key Pork Industry Issues: Europe

EU policy measures threatening competitiveness

Higher animal welfare and environmental costs will add further to the disadvantage of animal protein production in Europe.

Requiring non-GMO soybean meal adds at least \$60/ton to cost.

Pork cost price increases due to policy measures for selected EU countries (in EUR cent per kg cwe)



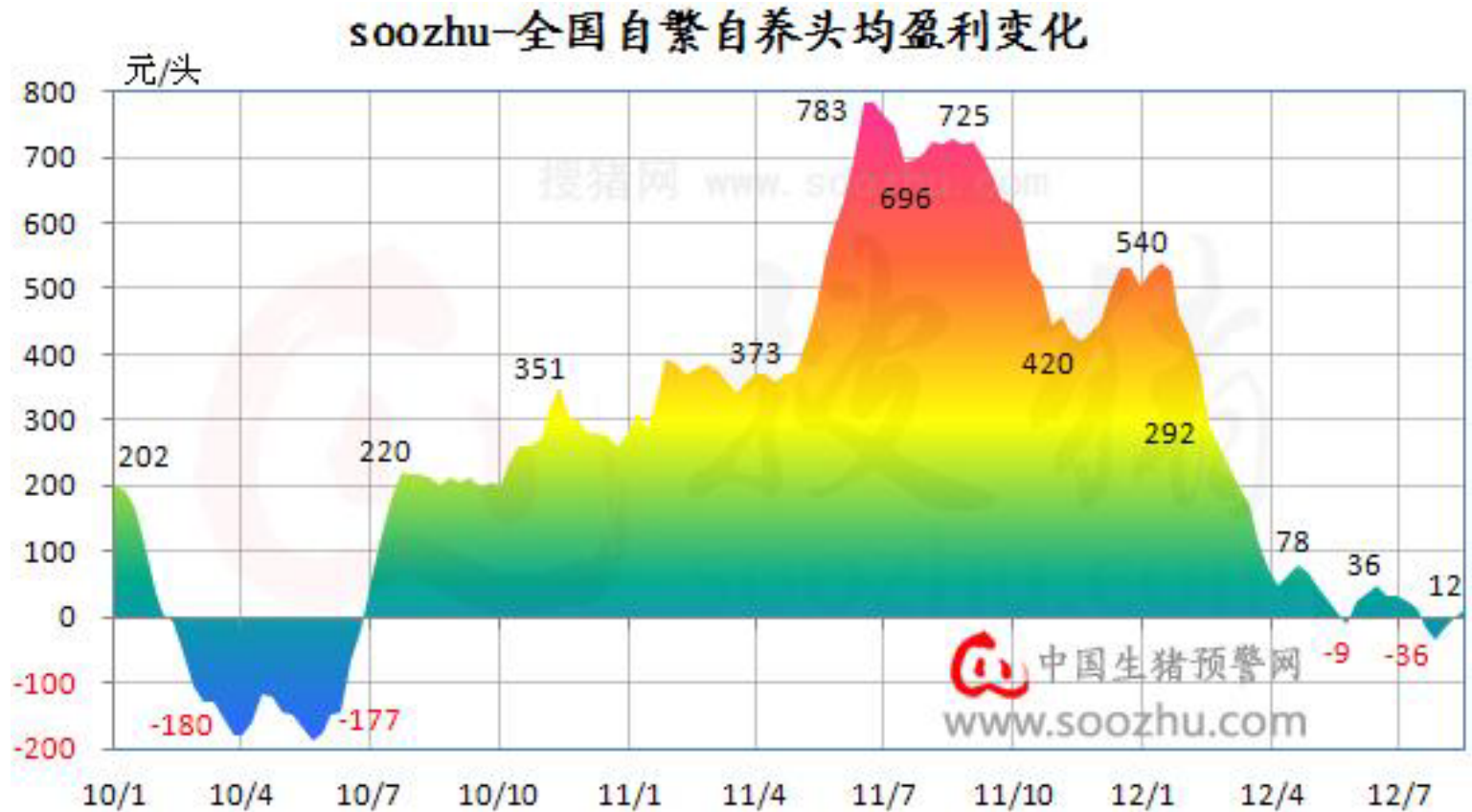
Source: Rabobank



Despite poor profitability, China not liquidating

China Hog Raising Profitability

Yuan/head



Source: Soozhu, 2012

Price of corn: US vs China

Protein production in China is very costly

Animal protein production is economically disadvantaged in China.

China has been competitive in labor intensive industries. Ag is land intensive. China is land disadvantaged.

Issues:

Safety and security of supply chain

Soy deficit, emerging corn deficit

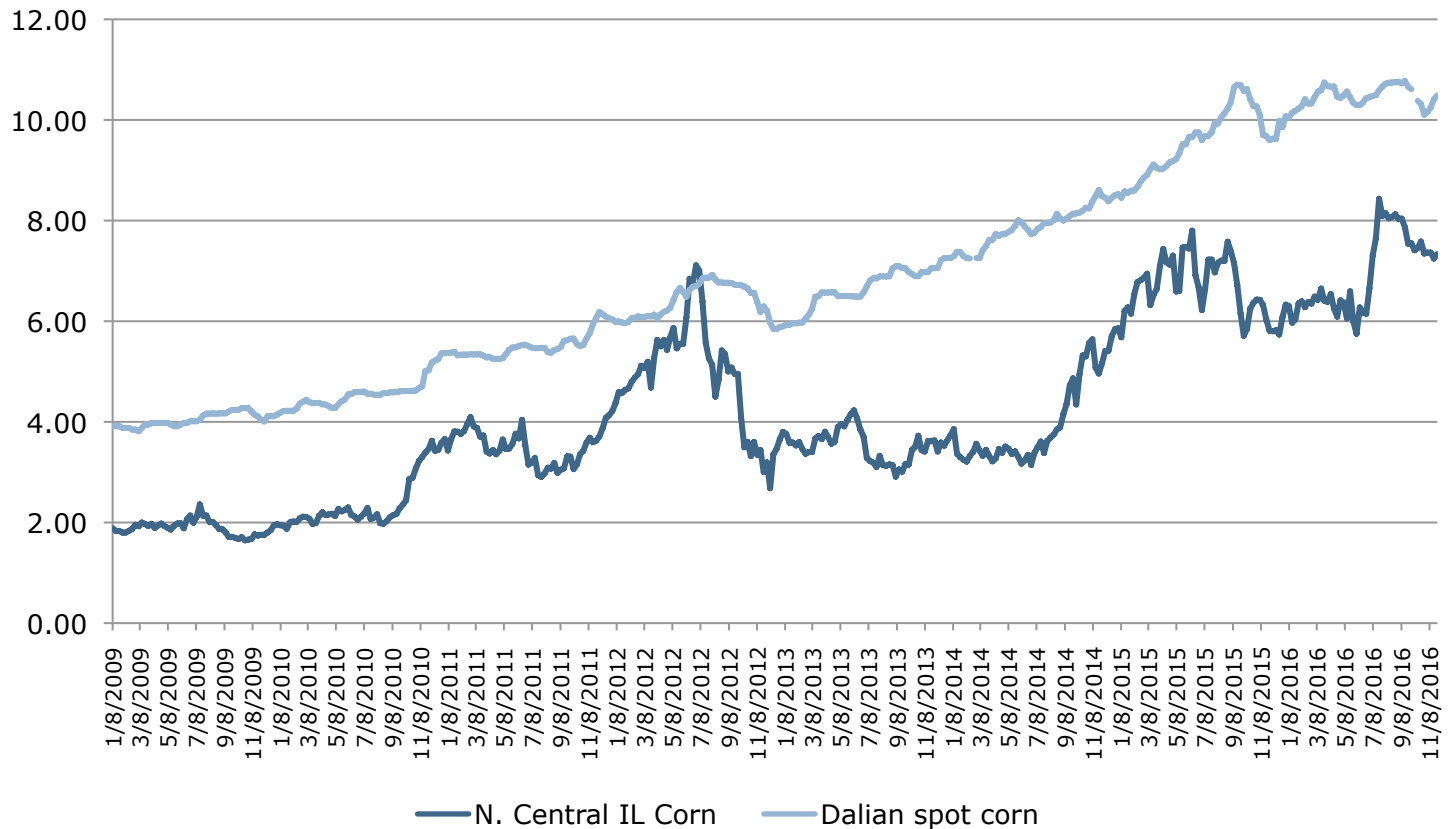
Cold chain

Land availability

Labor costs and availability rising rapidly

Food safety

USD/bushel



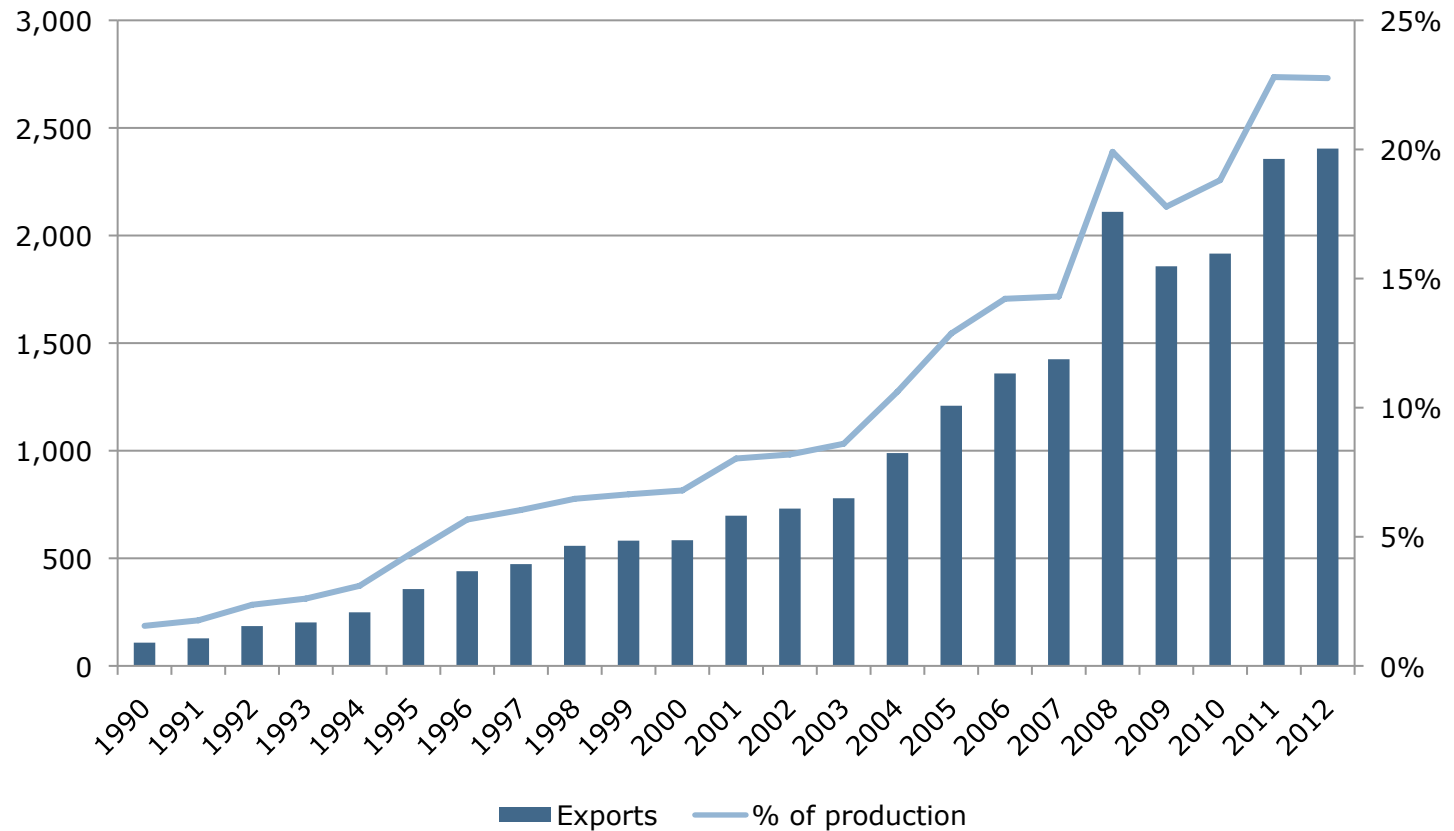
Source: Bloomberg, Rabobank, 2012



Exports more important: Risk and Opportunity

US Pork Exports

1,000 mt



Source: USDA, 2012



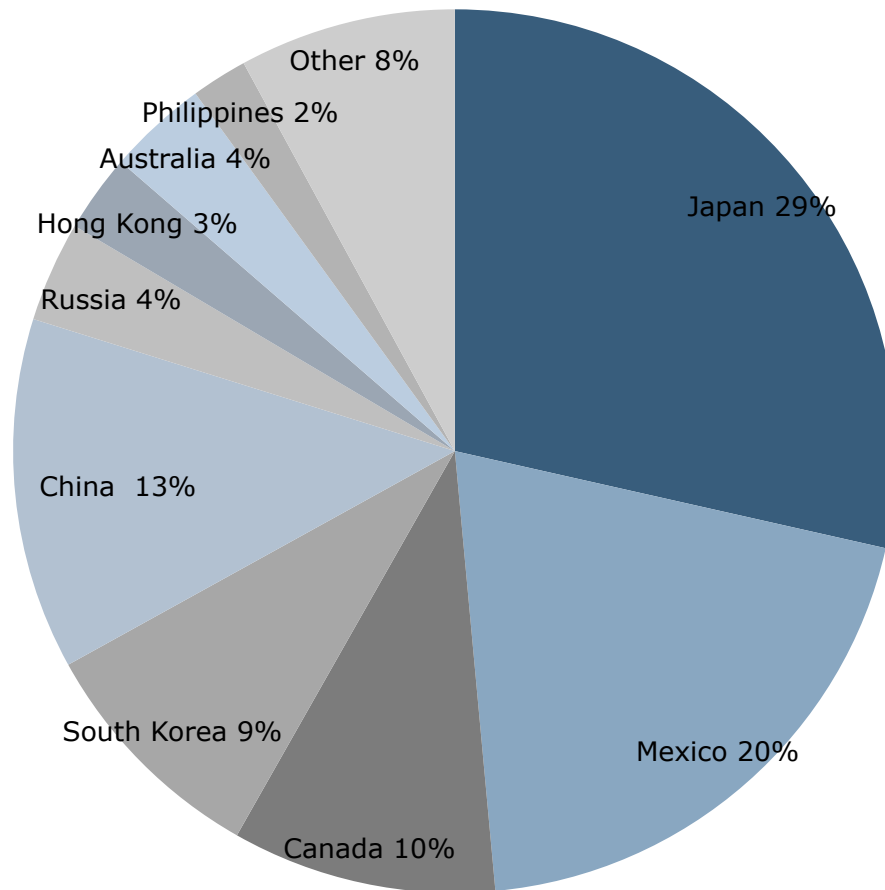
Key export destinations are grain deficit countries

2011 US Pork Exports by Destination

For the most recent month, September, exports were down 2% y/y, but up 3% m/m/.

China, -42%
Japan, -44%
Taiwan, -19%
Russia, -8%

But,
Mexico, +23%
SK, +34.5%
Canada, +10%



Source: USDA, 2012



World pork production to fall in 2013

Pork Production, 1,000 mt

	2007	2008	2009	2010	2011	2012	2013f
EU-27	22,858	22,596	21,300	21,300	22,400	21,900	21,200
United States	9,962	10,599	10,442	10,186	10,332	10,562	10,300
Brazil	2,990	3,015	3,130	3,195	3,227	3,311	3,290
Canada	1,746	1,786	1,789	1,772	1,770	1,775	1,750

Source: USDA, Rabobank forecasts, 2012



Futures market providing hedging opportunities

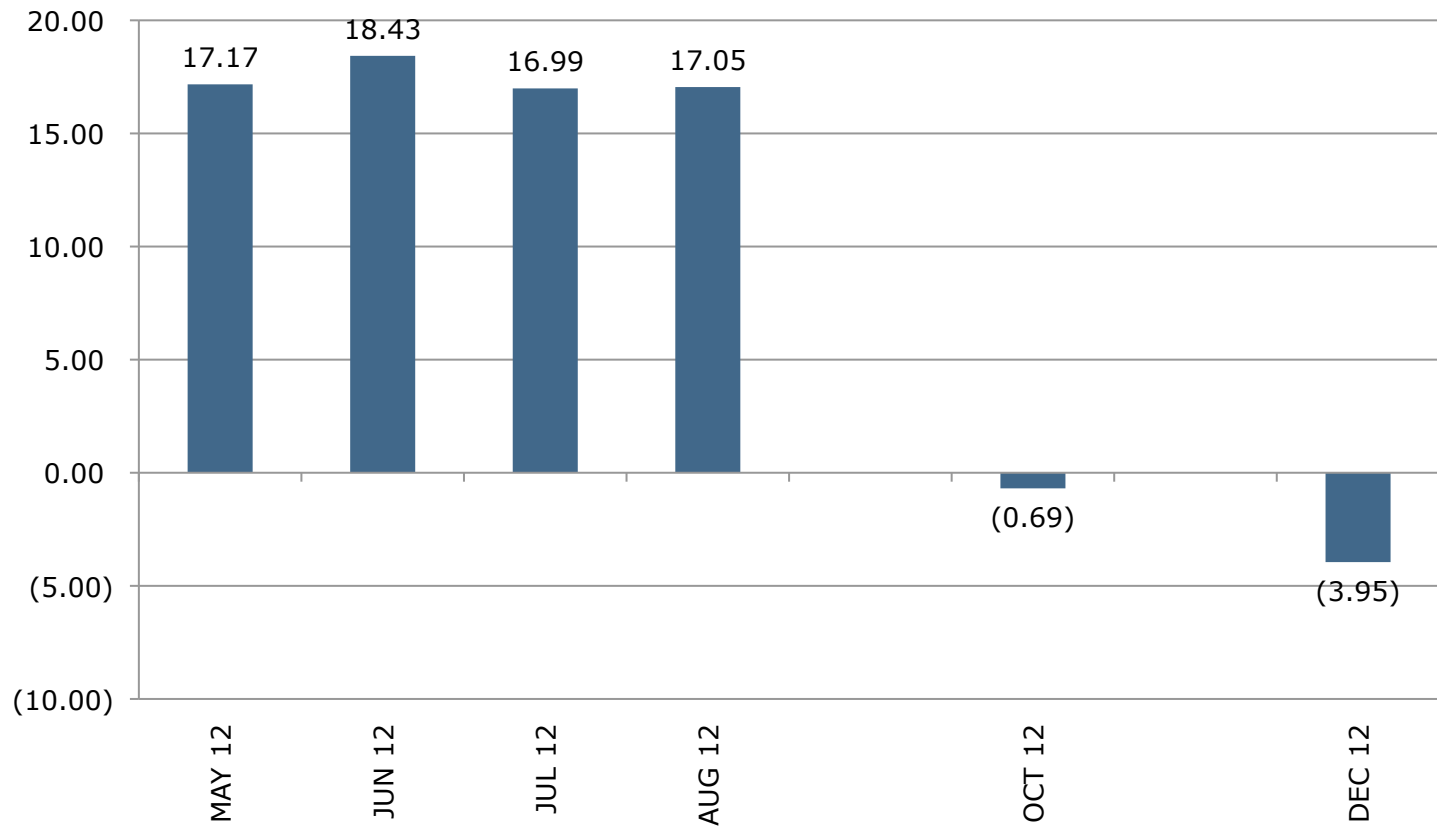


Hog production forward curve – volatile year

1/11/2012

USD/head

Producers that took advantage of forward markets were able to lock in strong summer profits, and limit losses into 2013.



Source: Bloomberg, Rabobank, 2012

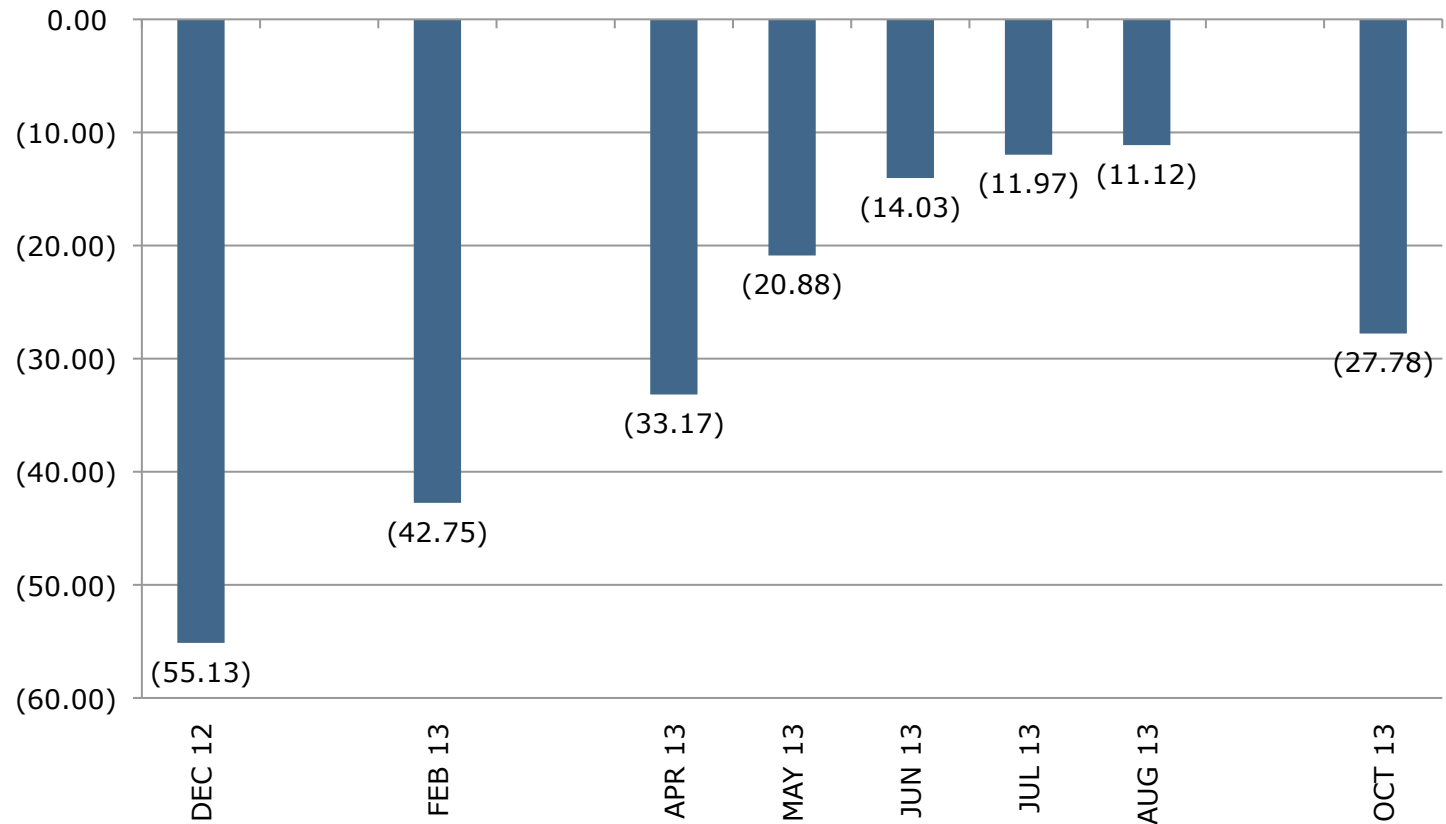


Hog production forward curve – volatile year

7/17/2012

USD/head

Producers that took advantage of forward markets were able to lock in strong summer profits, and limit losses into 2013.



Source: Bloomberg, Rabobank, 2012

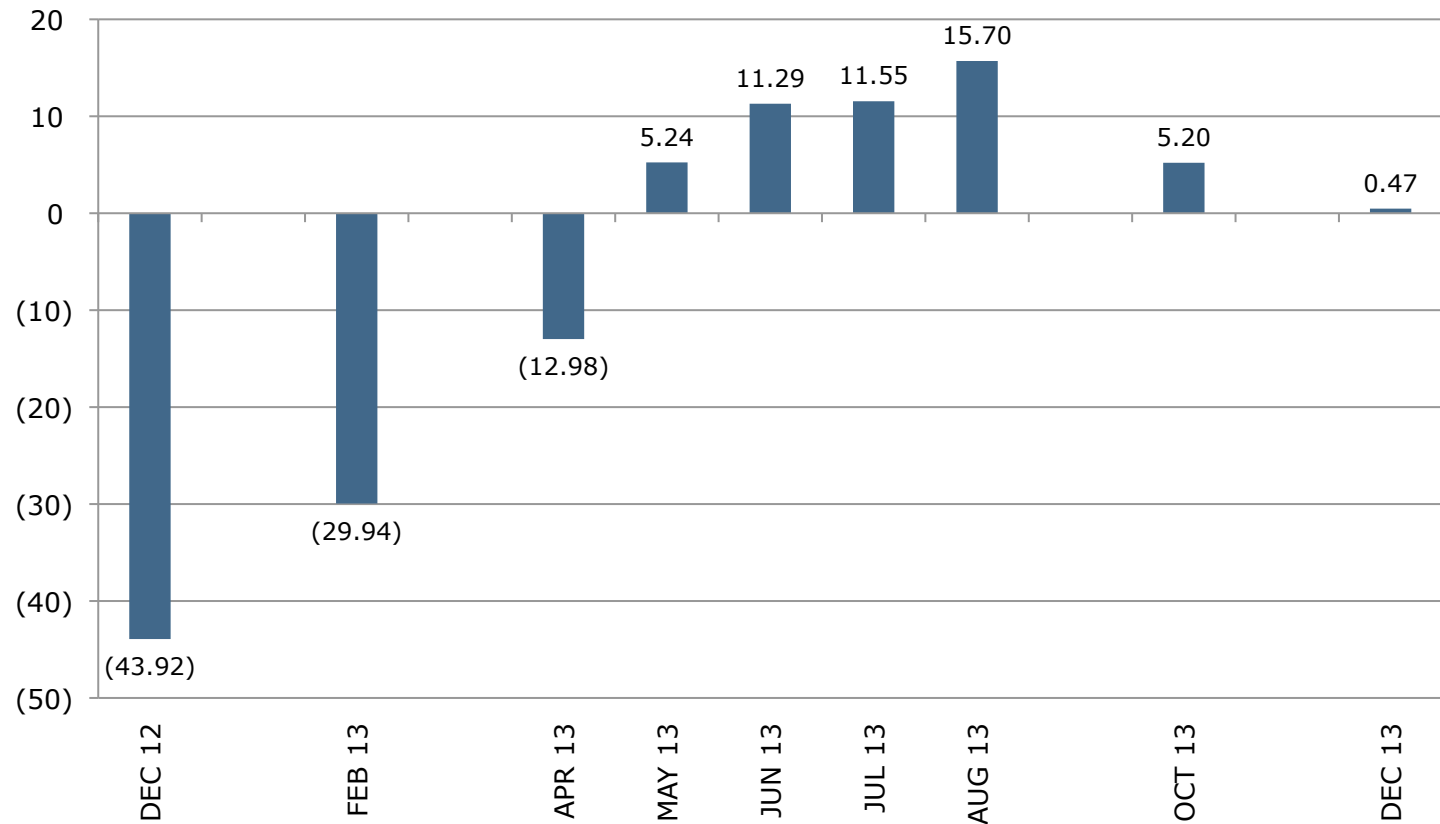


Hog production forward curve – volatile year

9/28/2012

USD/head

Producers that took advantage of forward markets were able to lock in strong summer profits, and limit losses into 2013.



Source: Bloomberg, Rabobank, 2012

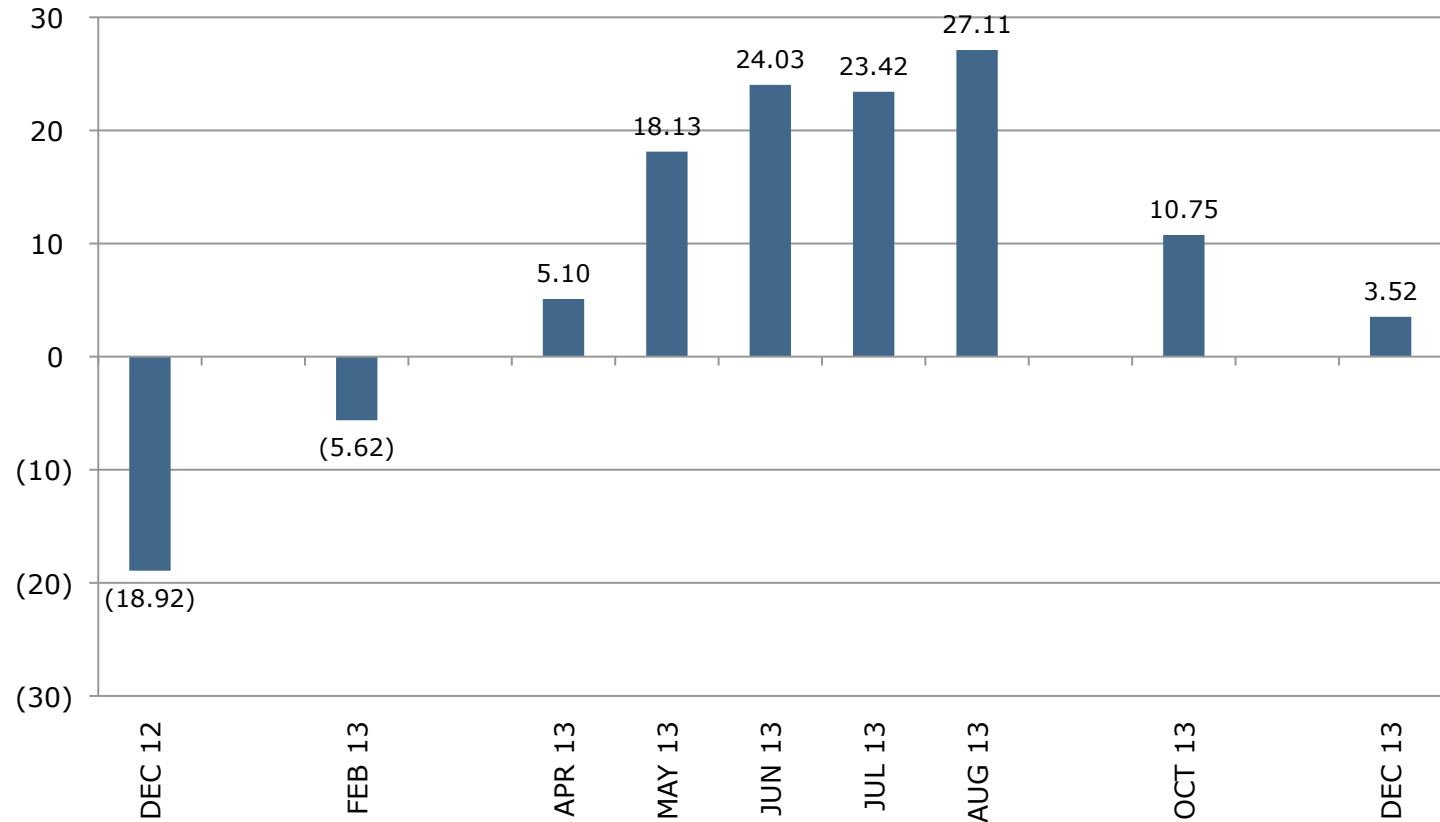


Hog production forward curve – volatile year

11/21/2012

USD/head

Producers that took advantage of forward markets were able to lock in strong summer profits, and limit losses into 2013.



Source: Bloomberg, Rabobank, 2012



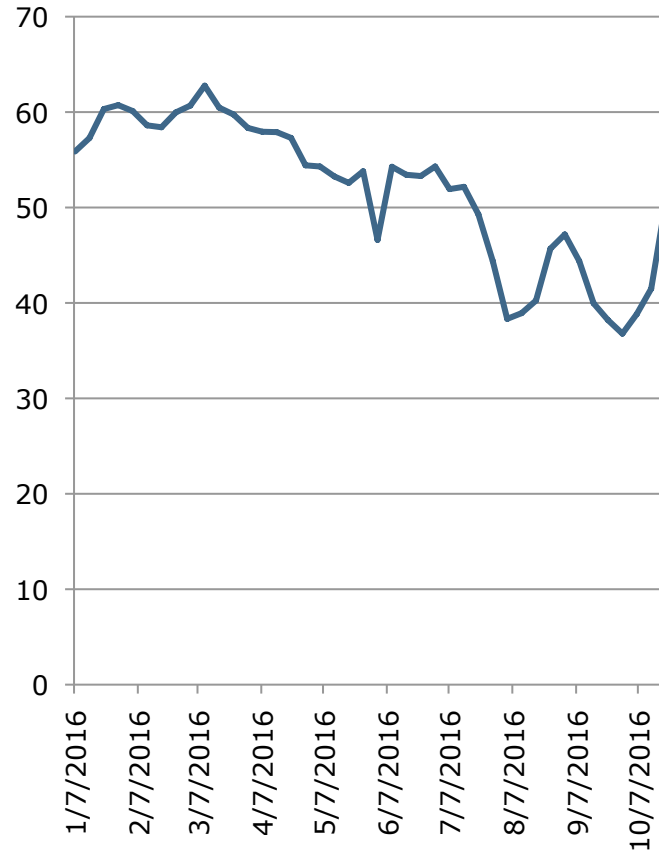
Signs of modest liquidation, then optimism

Sow Prices

US cents/lb

Slaughter weights have also declined from a high of near 278 to near 268 in recent weeks.

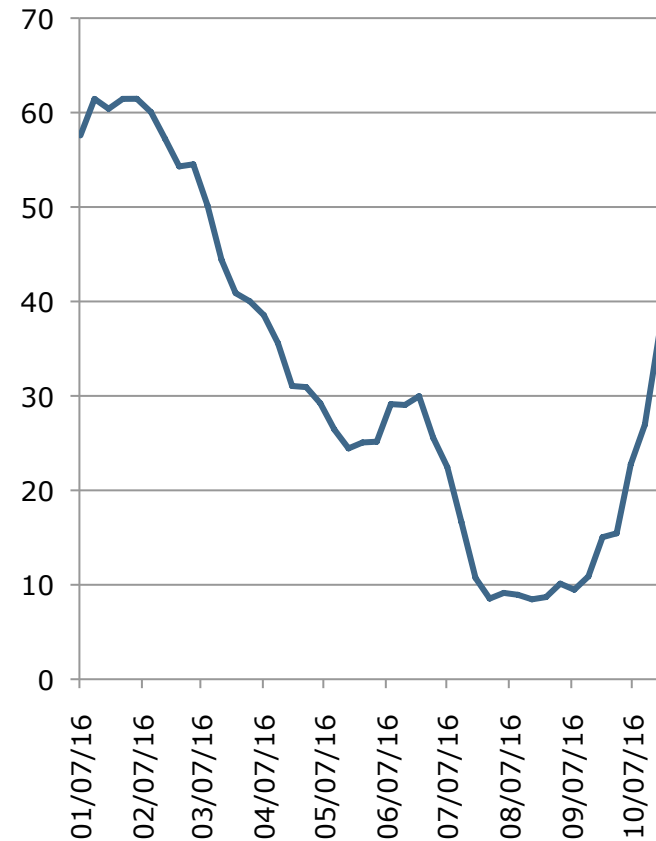
Feeder pig prices are in single digits in some cases – back near 1998 lows.



Source: Bloomberg, 2012

Feeder Pig Prices

USD/head



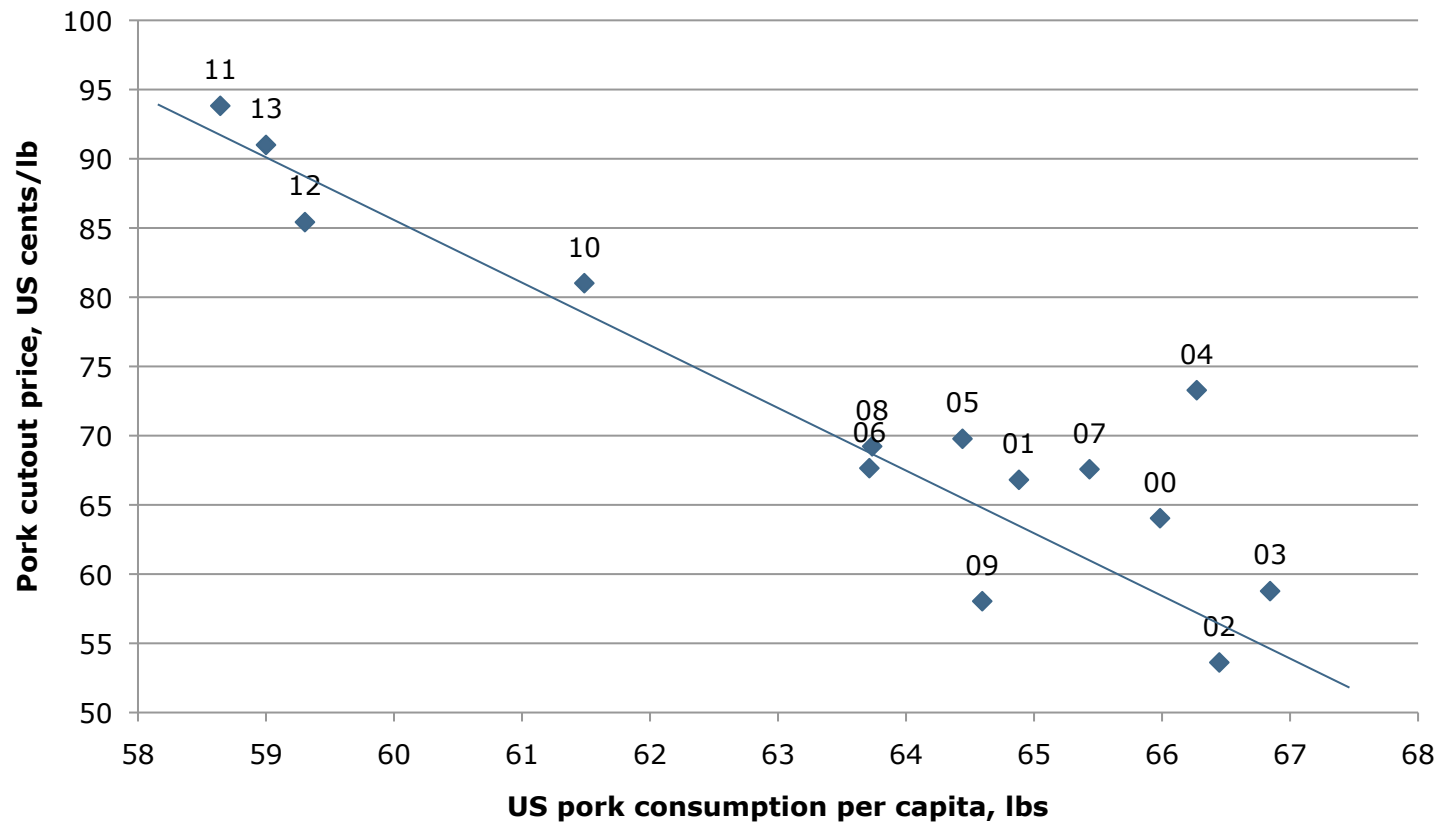
Source: USDA, 2012

Note: Feeder pig = 10-12 lb early weaned pig



US pork demand curve stable

US Pork Demand Curve



Source: Bloomberg, Rabobank, 2012



US Pork Situation Summary

**Take advantage of hedging opportunities
Others are doing so**

Europe and China will be major swing factors in 2013

US

**No supply elasticity
Hold your breath on SA crop production
Some benefit from reduced competition from beef**



The End



The end slide



United States

Chicken



Chicken summary

- US:** **Production cuts, but modest, probably 1.5 – 2.0%**
 prices are better
 buy rather than grow
 fewer long-term fixed price contracts
- Brazil:** **Continued growth, but with higher costs**
 only low single digit expansion
 out of soybeans, but plenty of corn
- EU:** **Continued slow growth in production and consumption**



Little sign of expansion – cuts?

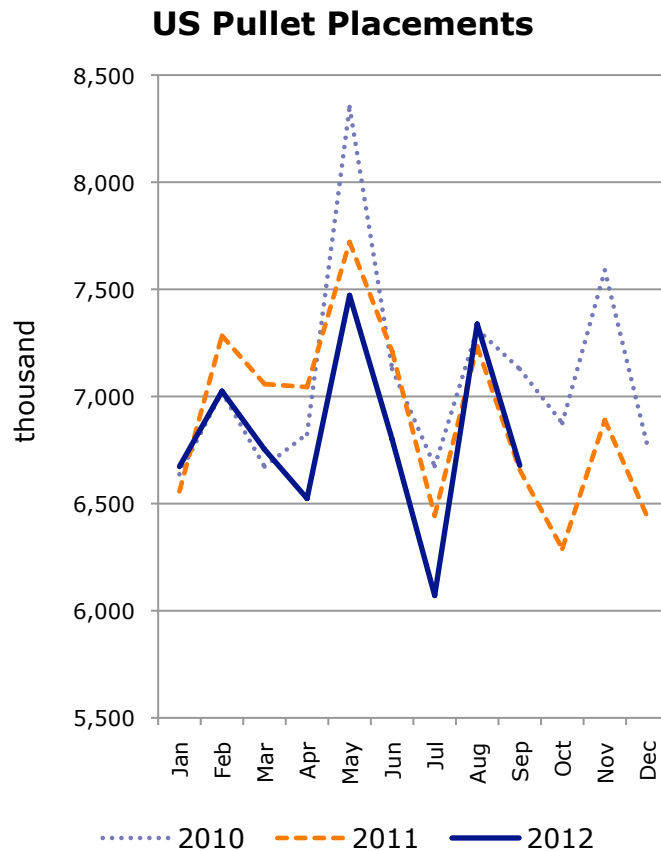
US Pullet Placements

We expect RTC broiler production to fall by 1% in 2012 and at least another 1.5% in 2013.

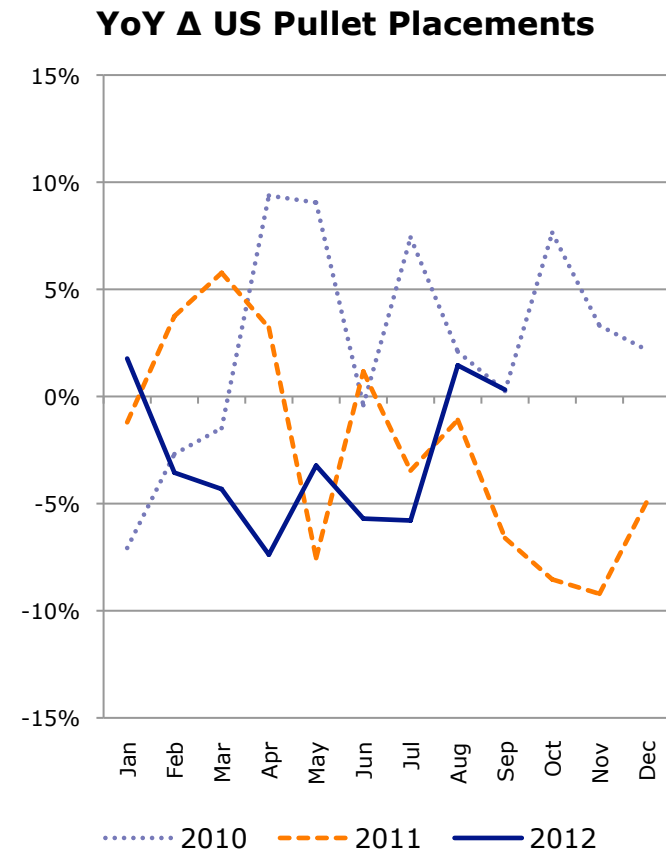
This has put the industry on more solid ground for pricing and profitability than compared to the downturns in 2008/9 and 2011.

Weights also remain flat to down from year-ago levels.

Thousand head/month



YoY % Change



Source: USDA, 2012

Source: USDA, 2012



Much of the industry has been profitable recently

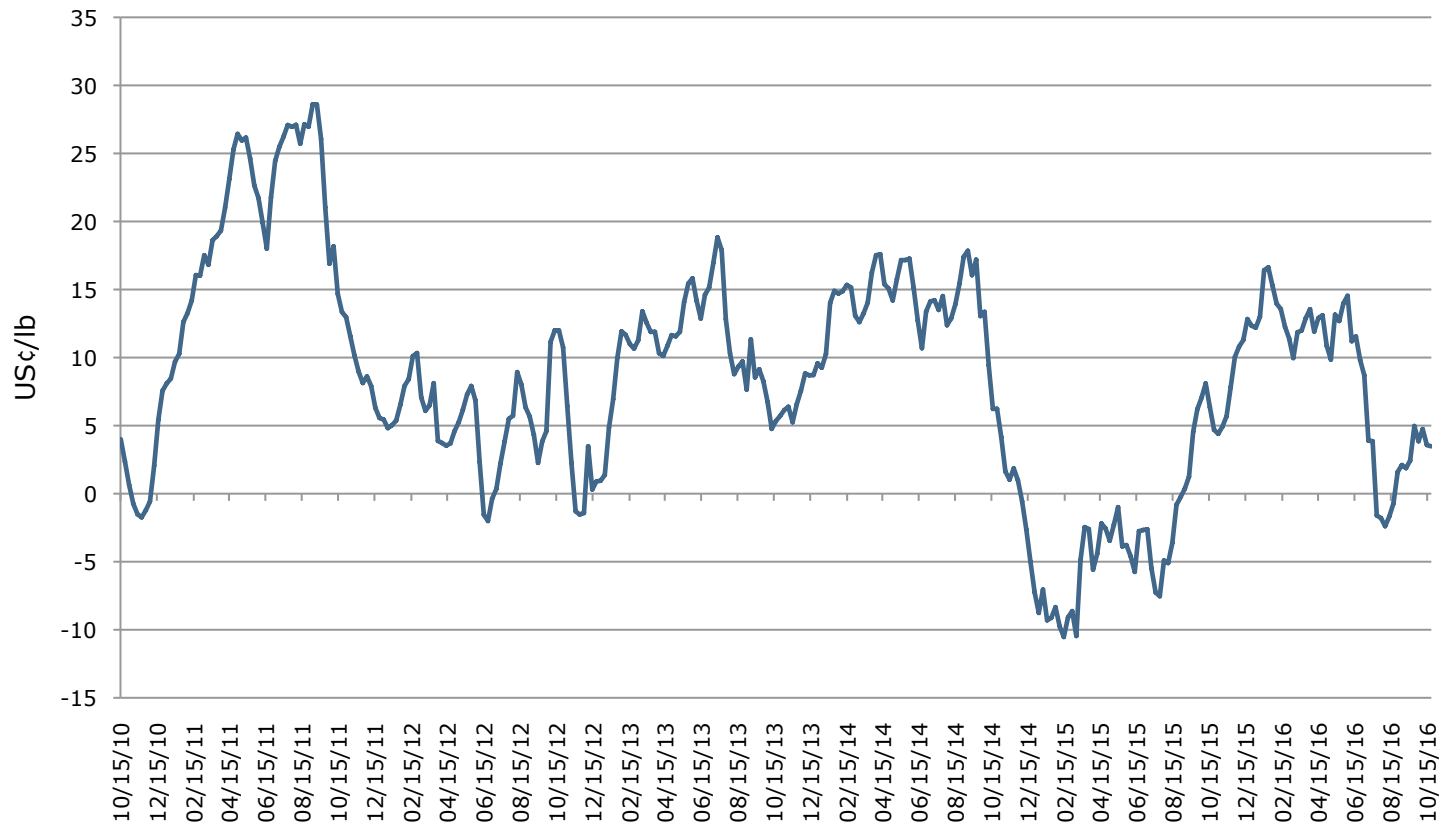
US Broiler Production Margin – Spot Market Feed Costs

US cents/lb

Note:

Model excludes basis – 80 cents/bu basis adds 2.5 cents/lb to cost

Industry practice of offering fixed price long term contracts



Source: Bloomberg, Rabobank, 2012

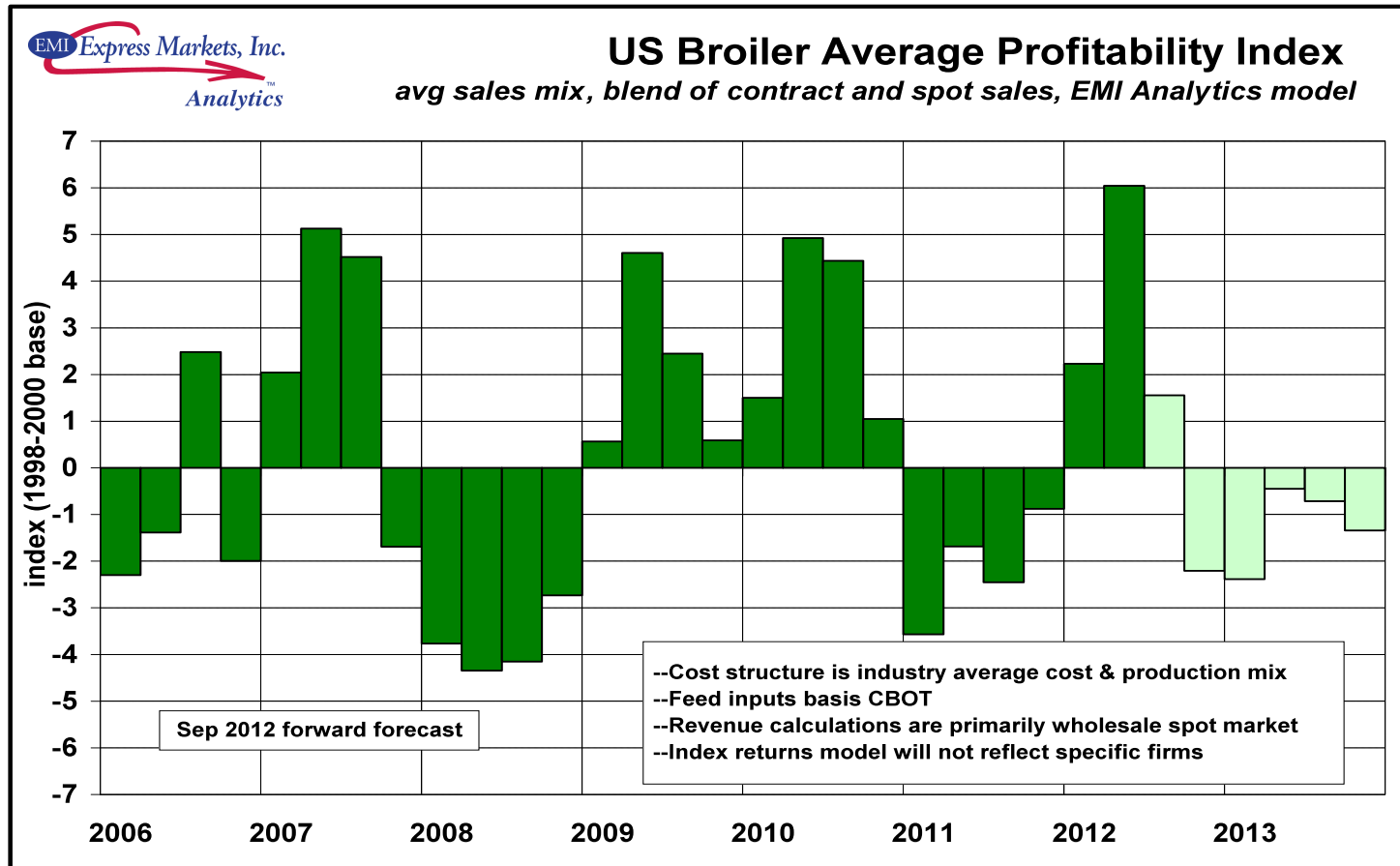


Q42012 and Q12013 will be difficult

EMI Broiler Profitability Forecast

As higher corn and soybean meal costs roll through, industry profitability will be challenged through the winter when prices seasonally decline.

Given improved pricing due to supply discipline, however, some producers may even be profitable in Q4



Source: EMI, Analytics, 2012



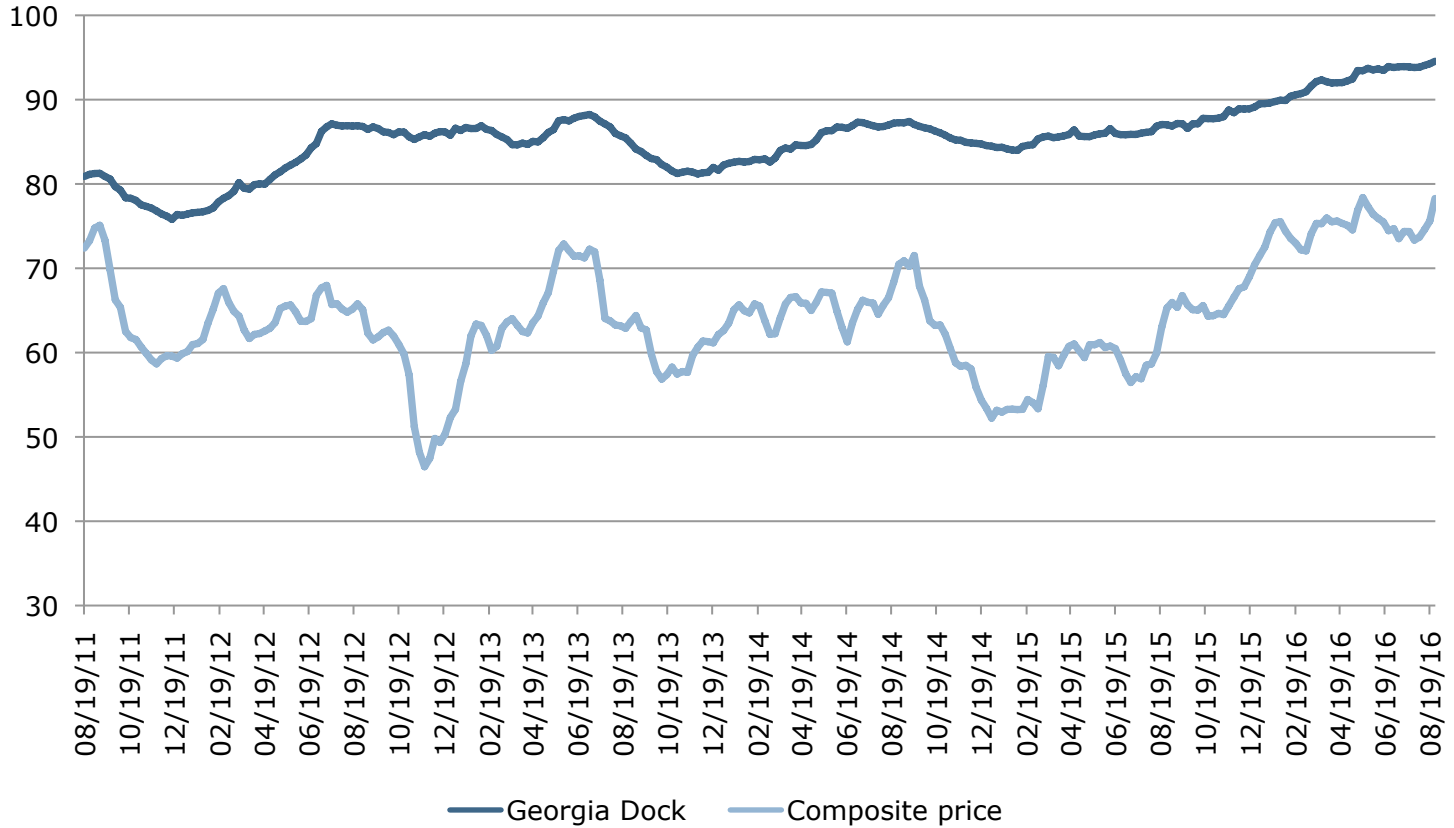
That was then. This is now.

US cents/lb

Composite price =
 50% leg quarters
 20% B/S breast
 12% wings

Whole birds
 Georgia dock: LY \$0.87, TY \$0.95.
 SSB: LY \$1.36, TY \$1.48
 Tenders: LY \$1.40, TY \$1.75
 Wings: \$0.95, TY \$1.85.
 Leg quarters: LY \$0.53, TY \$0.52.

Cold storage: total chicken inventory down 14% from year ago levels at the end of July.

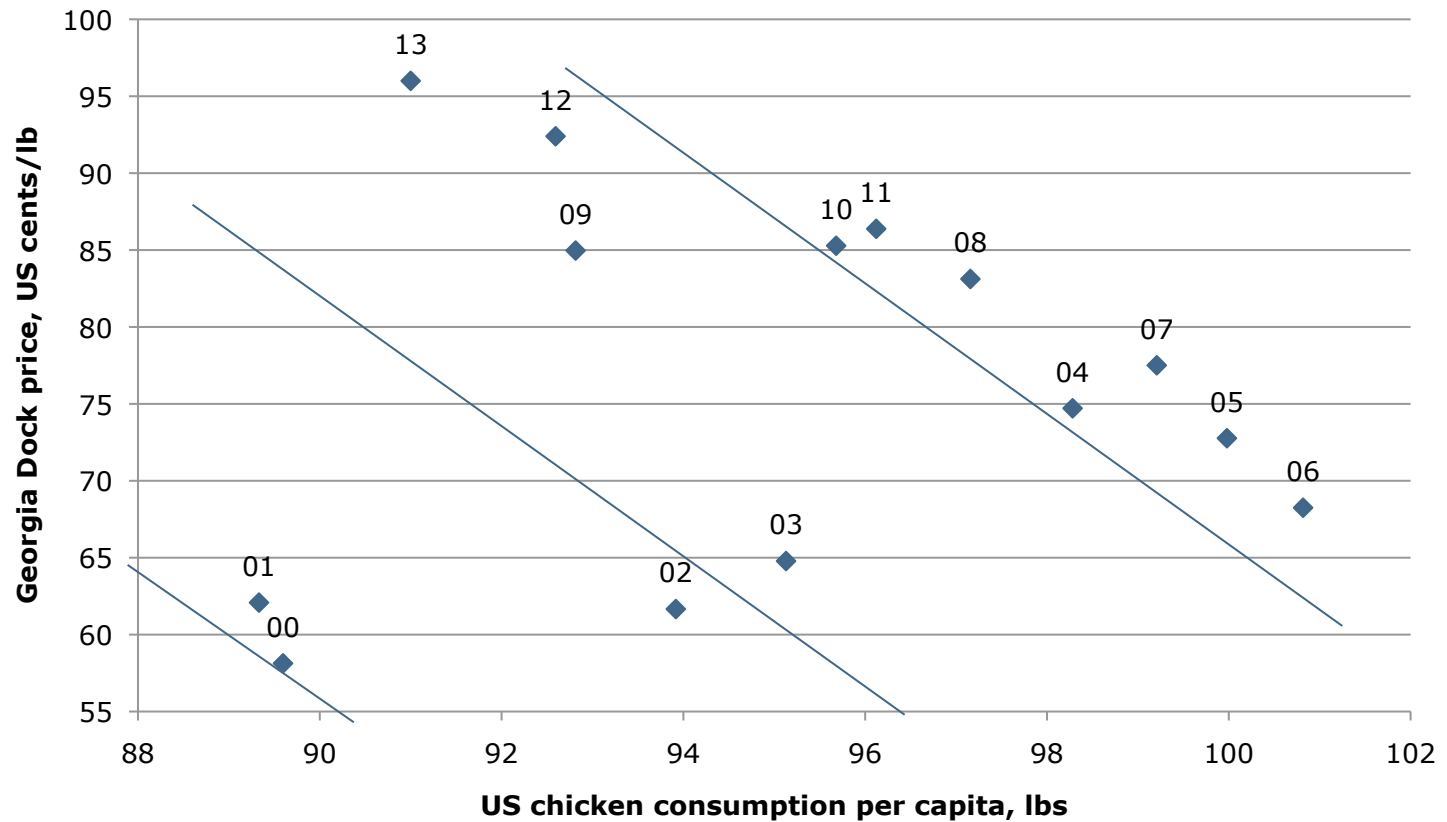


Source: USDA, 2012



Tight supplies, also for competitive meats, should be supportive to pricing

US Chicken Demand Curve



Source: Bloomberg, Rabobank, 2012



Brazil: Opportunities for poultry

Poultry exports are expected to rise faster than domestic consumption

The CAGR for per capita consumption is likely to decelerate going forward

CAGR 11-22: 1.2%
2011:46 kg/ year
2022:51 kg/ year

Exports are expected to grow by 4% year (average)

Where could we be wrong?

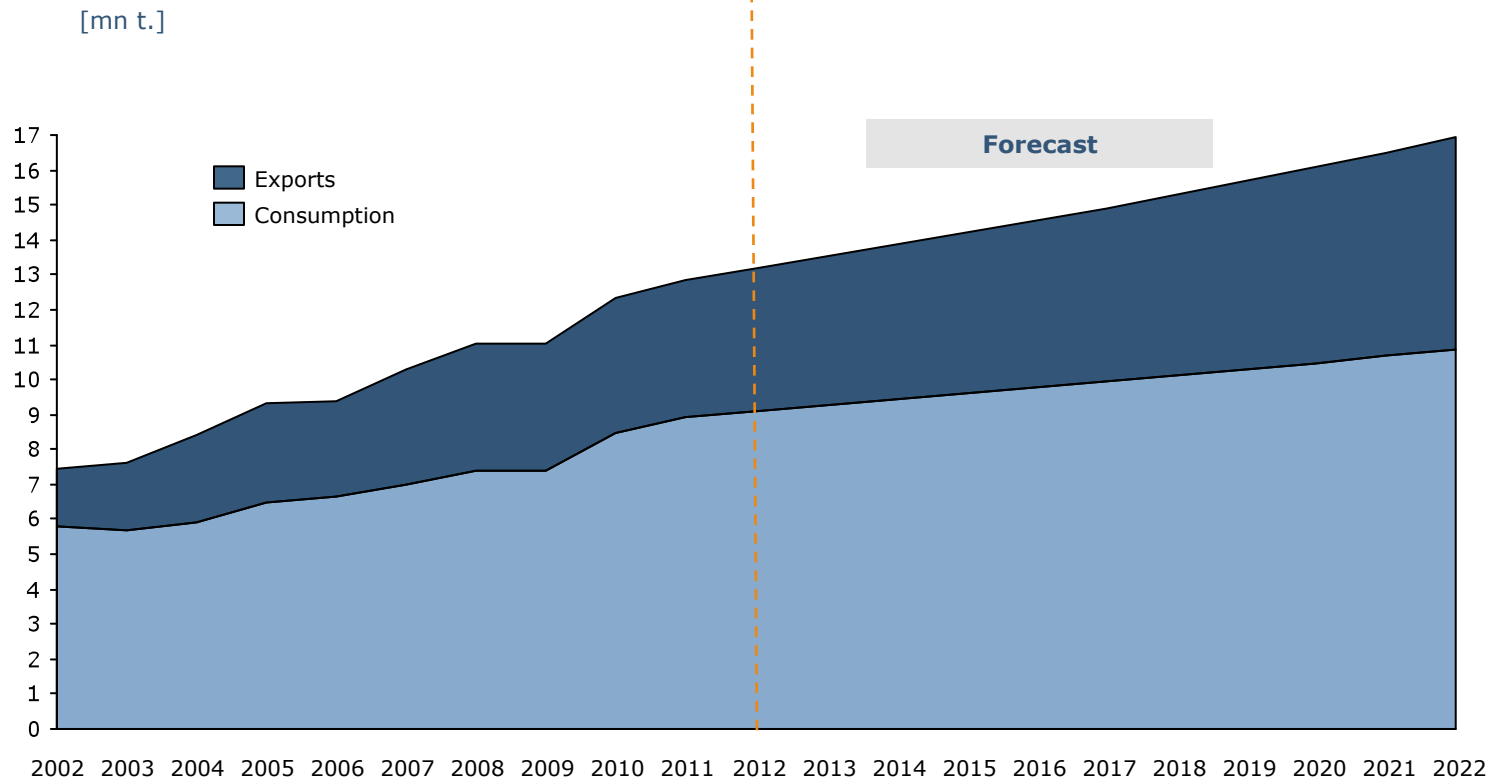
Upside

- Exports may accelerate if part of the projected corn supply surplus is directed to poultry production
- Domestic demand continues to expand at the same pace of growth of the past 10 years

Downside

- Deceleration of the world economic growth
- Disease outbreak/ trade barriers
- Population growing at a lower rate

Poultry domestic consumption and exports

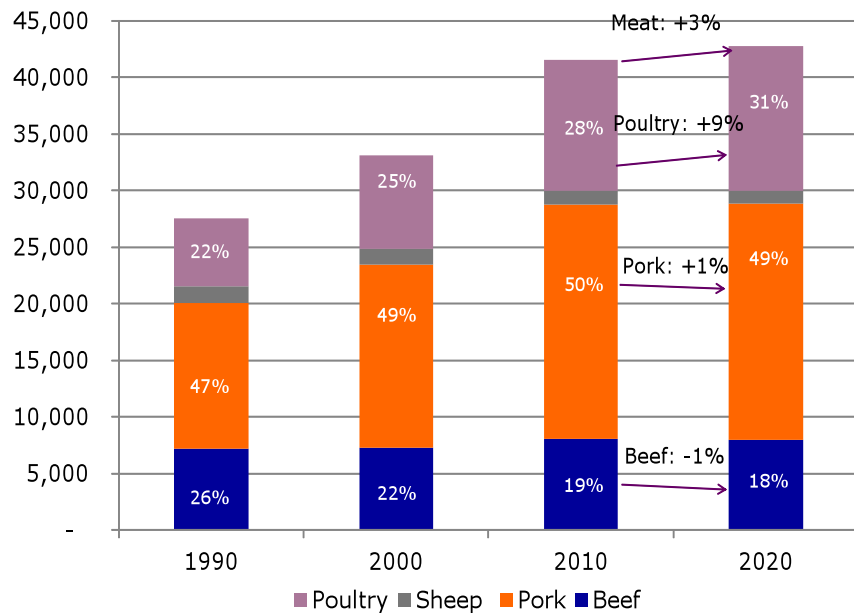


Source: UBABEF, Informa Economics, Raboban estimates

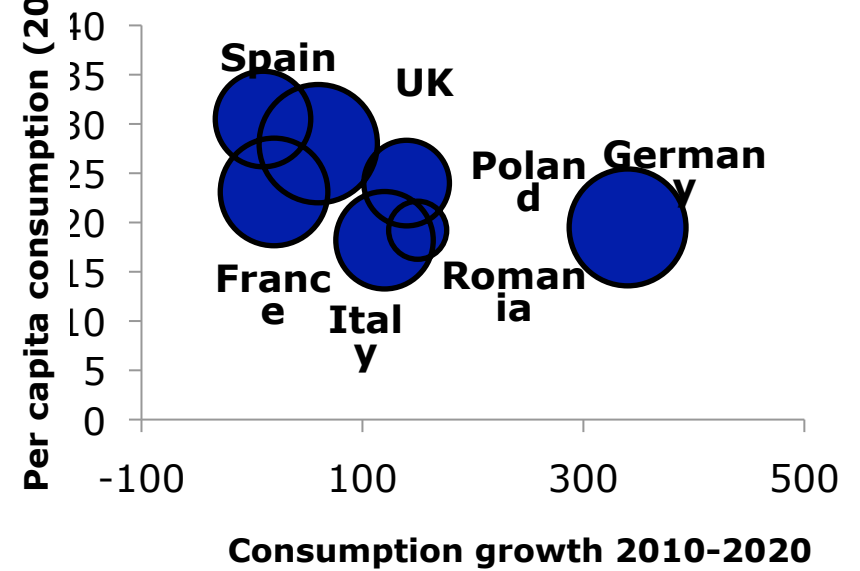


Little animal protein growth in Europe, some for poultry

EU market growth 2010-2020

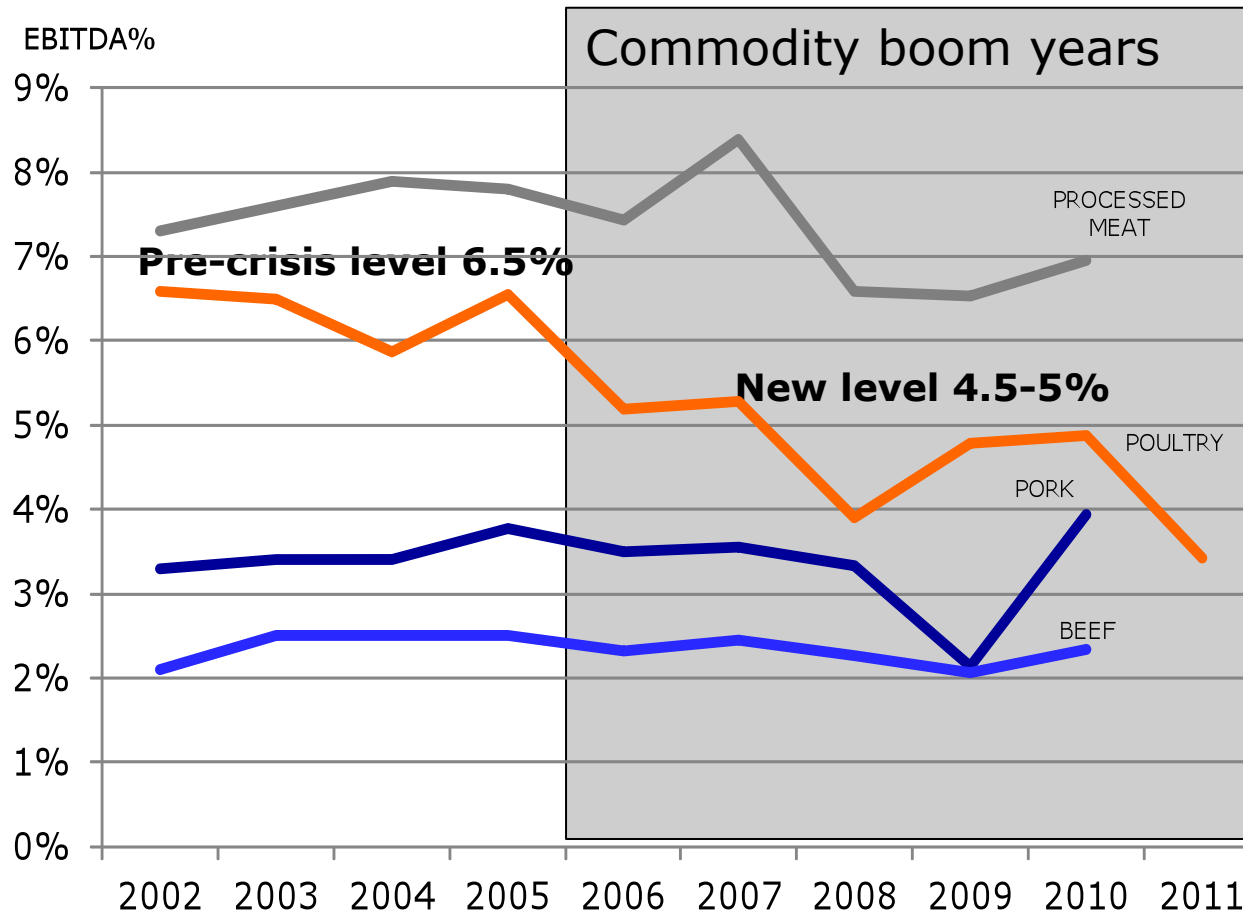


EU market growth 2010-2020

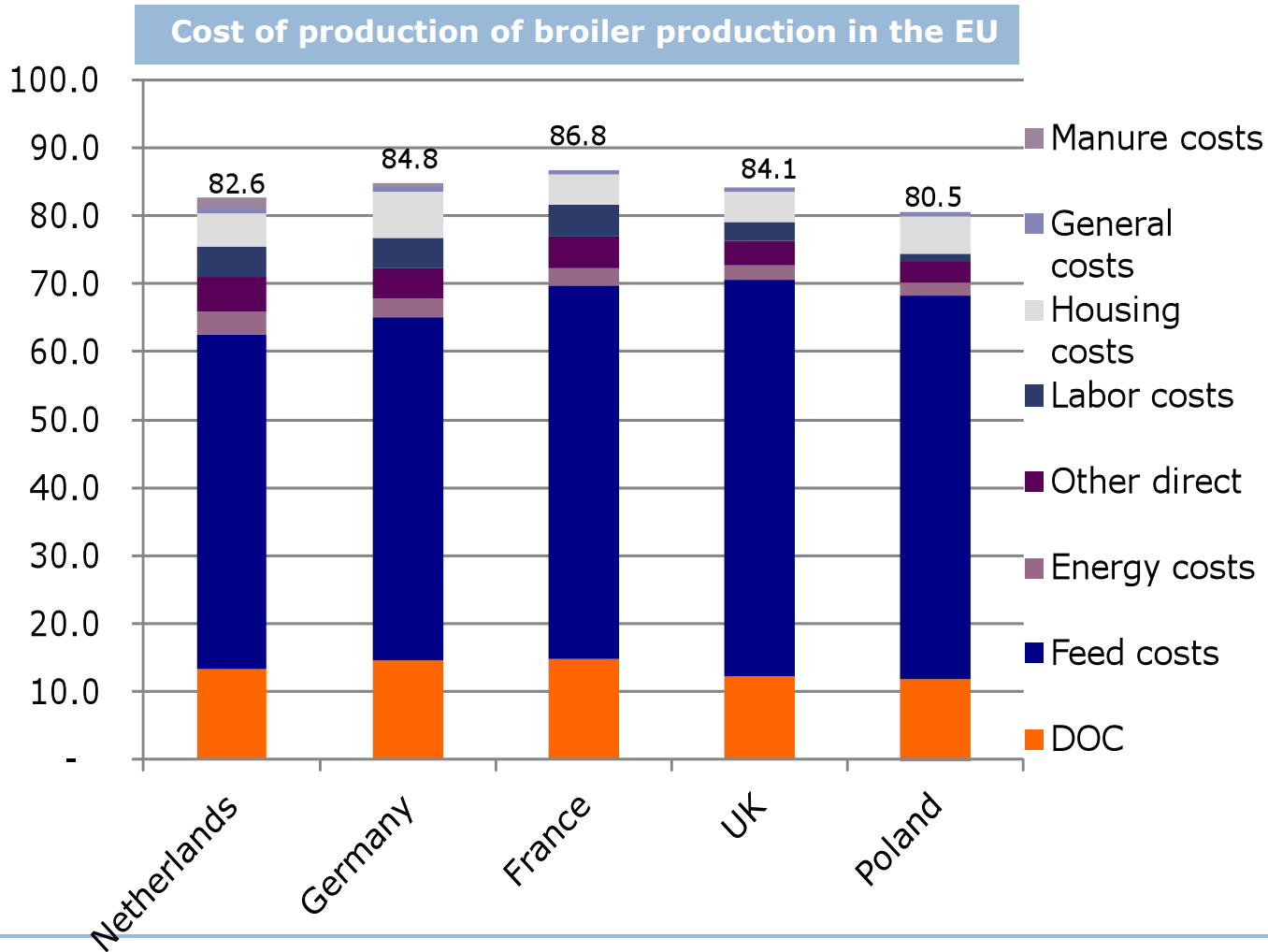


EU Poultry industry: Lower margins since commodity boom years

EBITDA margin trend 2002-2012



French poultry industry relative expensive in Europe

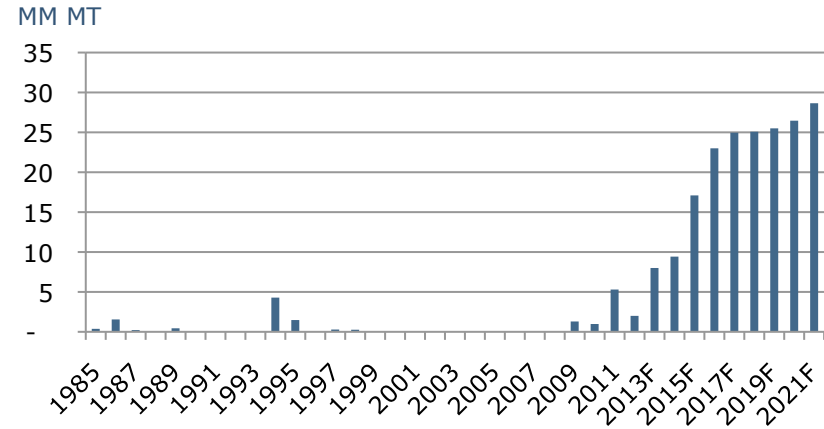


Key elements affecting poultry markets

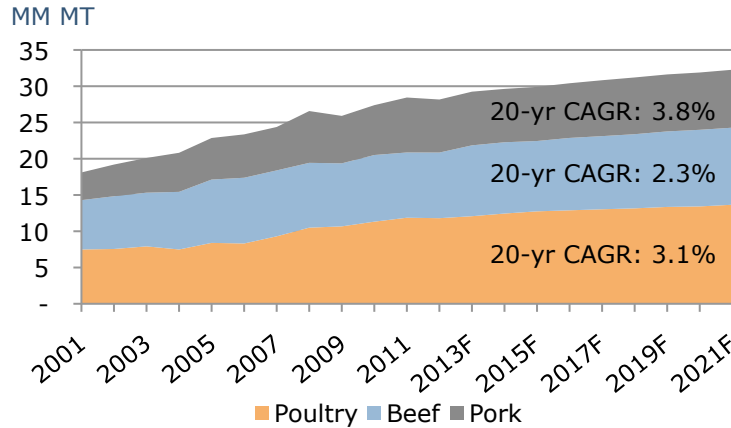
Growing importance of international trade

- 5
 - Meat trade is growing – parts arbitrage, disconnect between location of grain surplus and meat demand growth.
 - Pork has accelerated: EU production declining, China self-sufficiency in grain declining. Brazil big competitor for poultry, beef.
 - Need for international marketing approach and production platforms.
 - Need to balance ST tactical challenges (trade disputes) with having a LT vision.

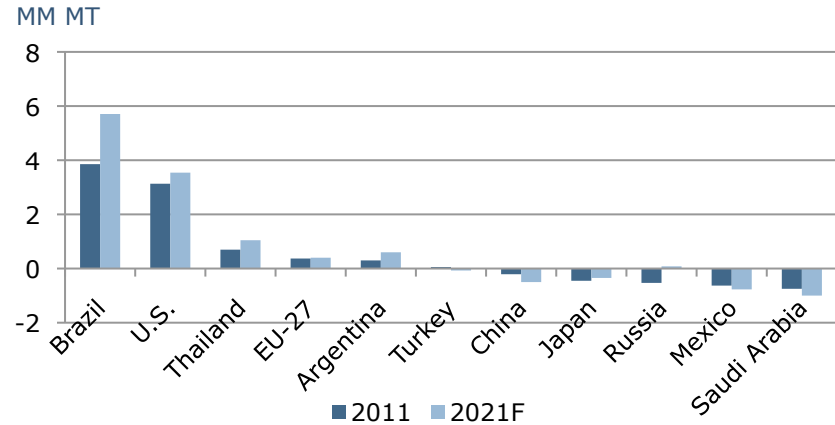
China coarse grains imports



Global meat exports



Export-import for major poultry-trading countries



The world can produce more

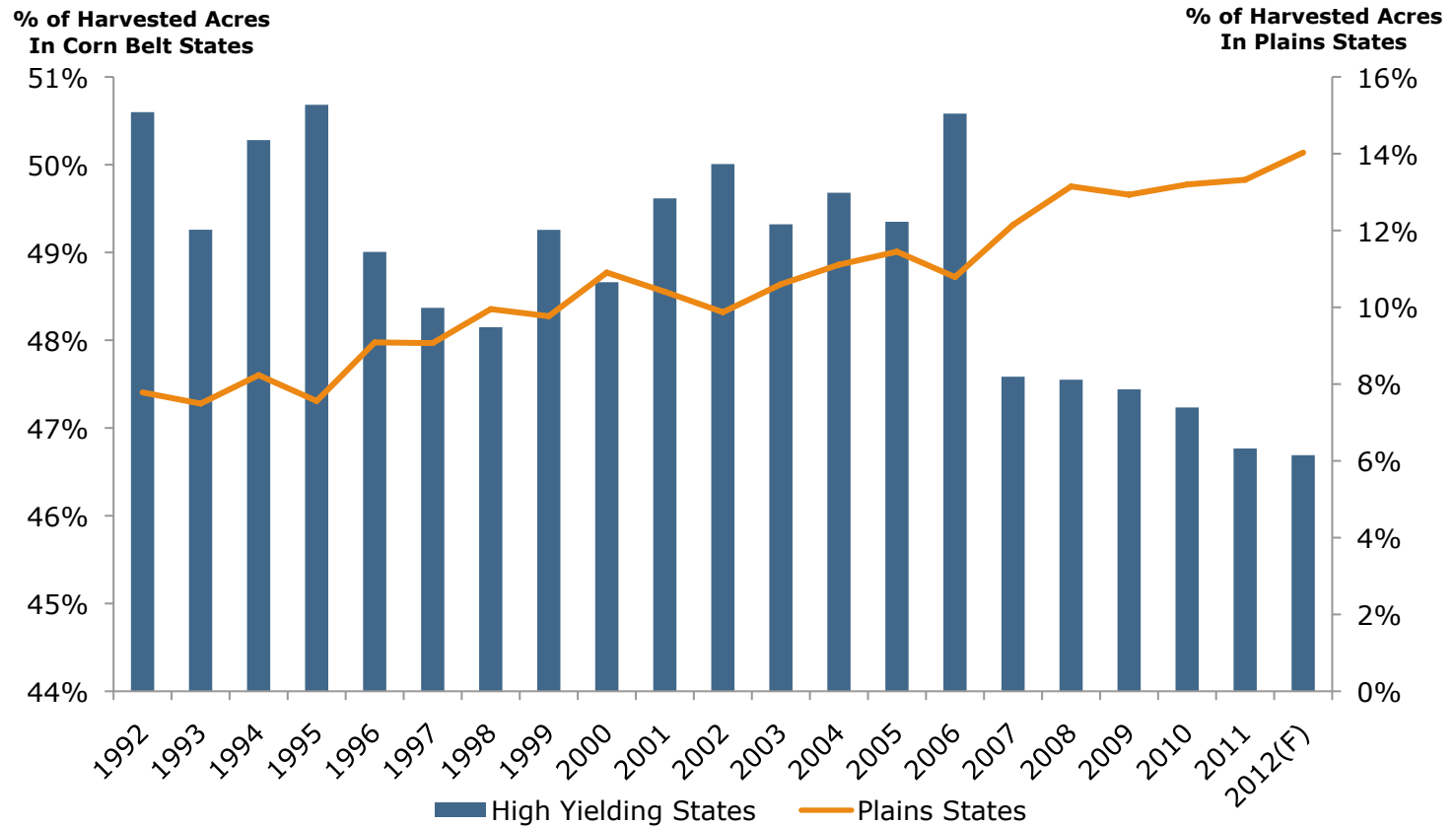
Key challenges to incremental US
corn production



US corn planting is shifting to less fertile land

U.S. Corn - Geographic Distribution of Corn Acres

Incremental corn production is shifting North and West to land that gets less rain and has a shorter growing season. In addition, more corn is following corn, disrupting natural rotation. This reduces yield per acre by at least 15 bushels per acre, or near 10%. Also, weeds and insects are becoming increasingly resistant to genetically modified traits, increasing costs and reducing yields.

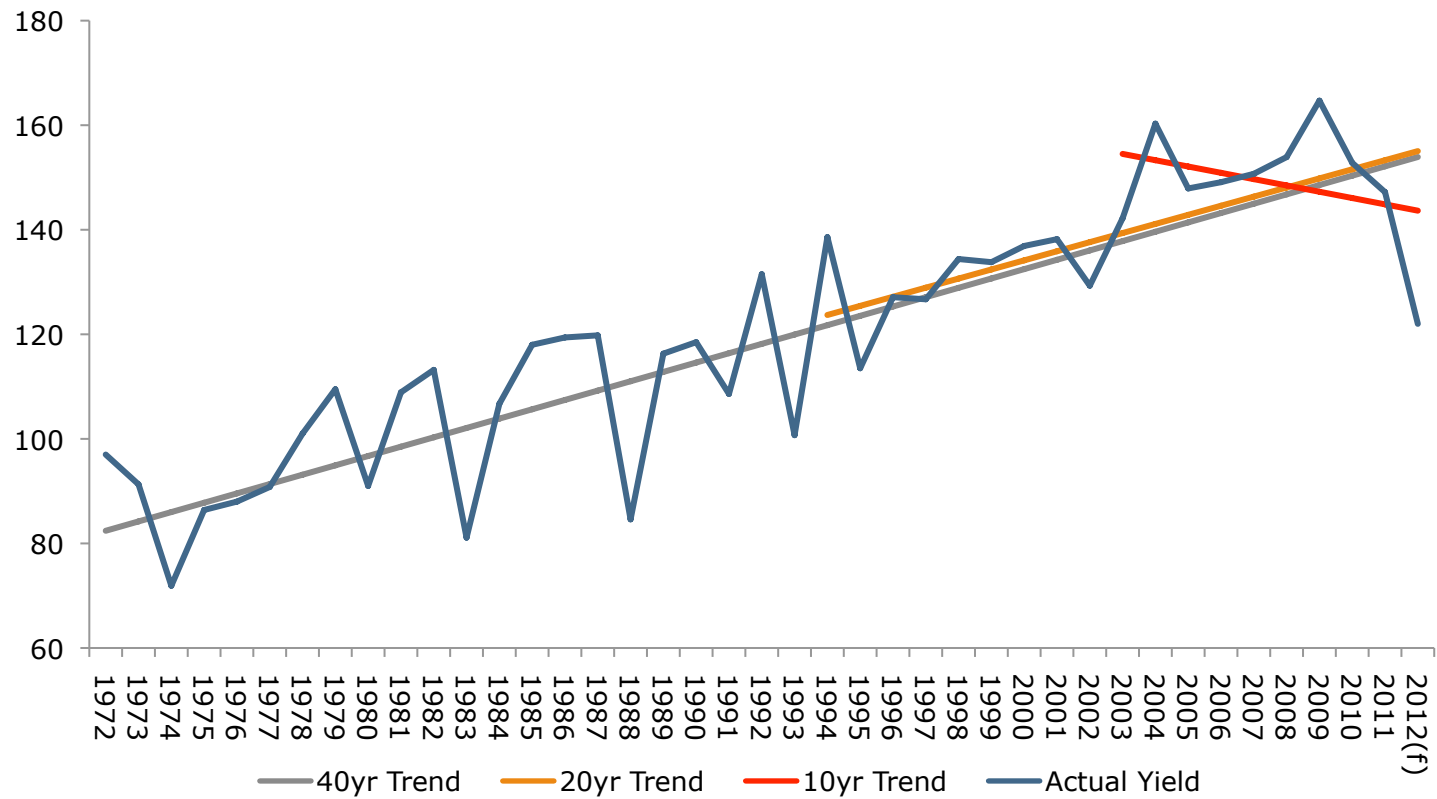


Source: USDA, 2012



US corn yield improvements are decelerating

Bushels / acre



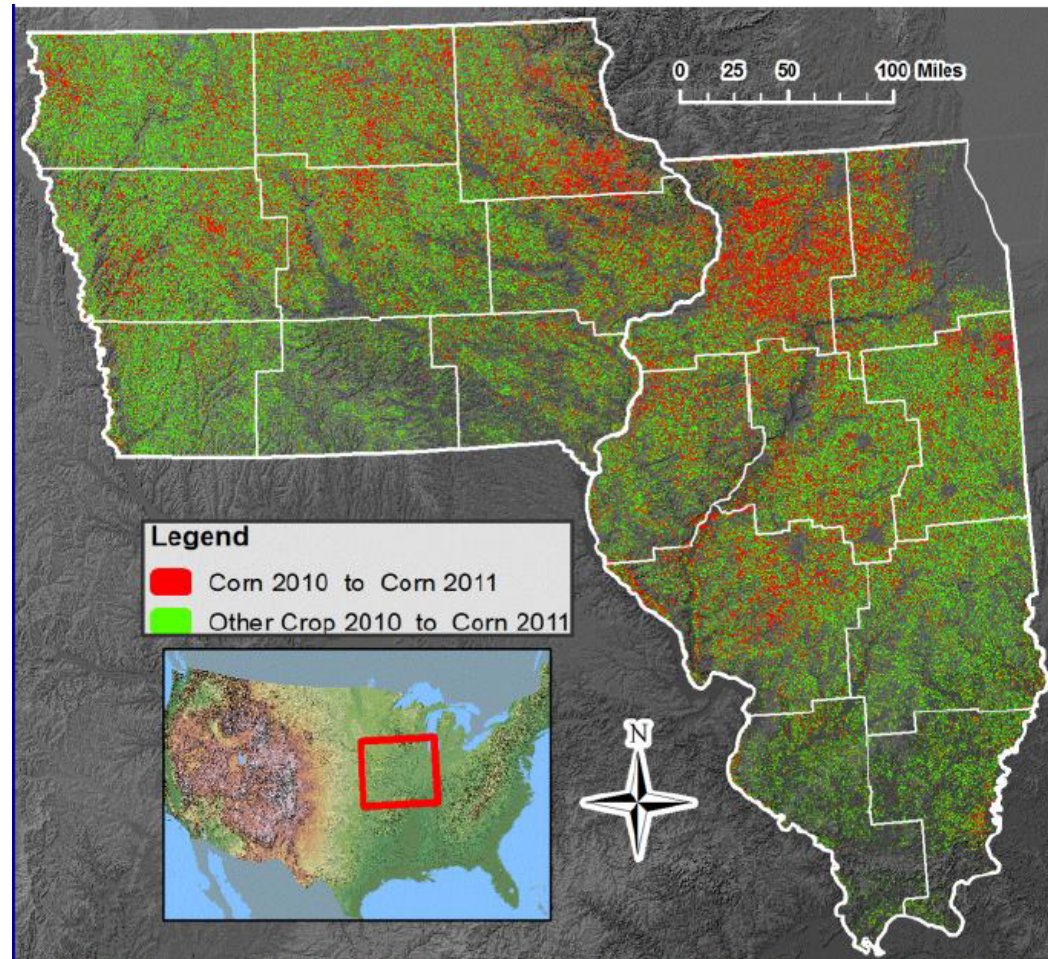
Source: USDA, 2012



United States

Corn on Corn Planting in Iowa and Illinois, 2011

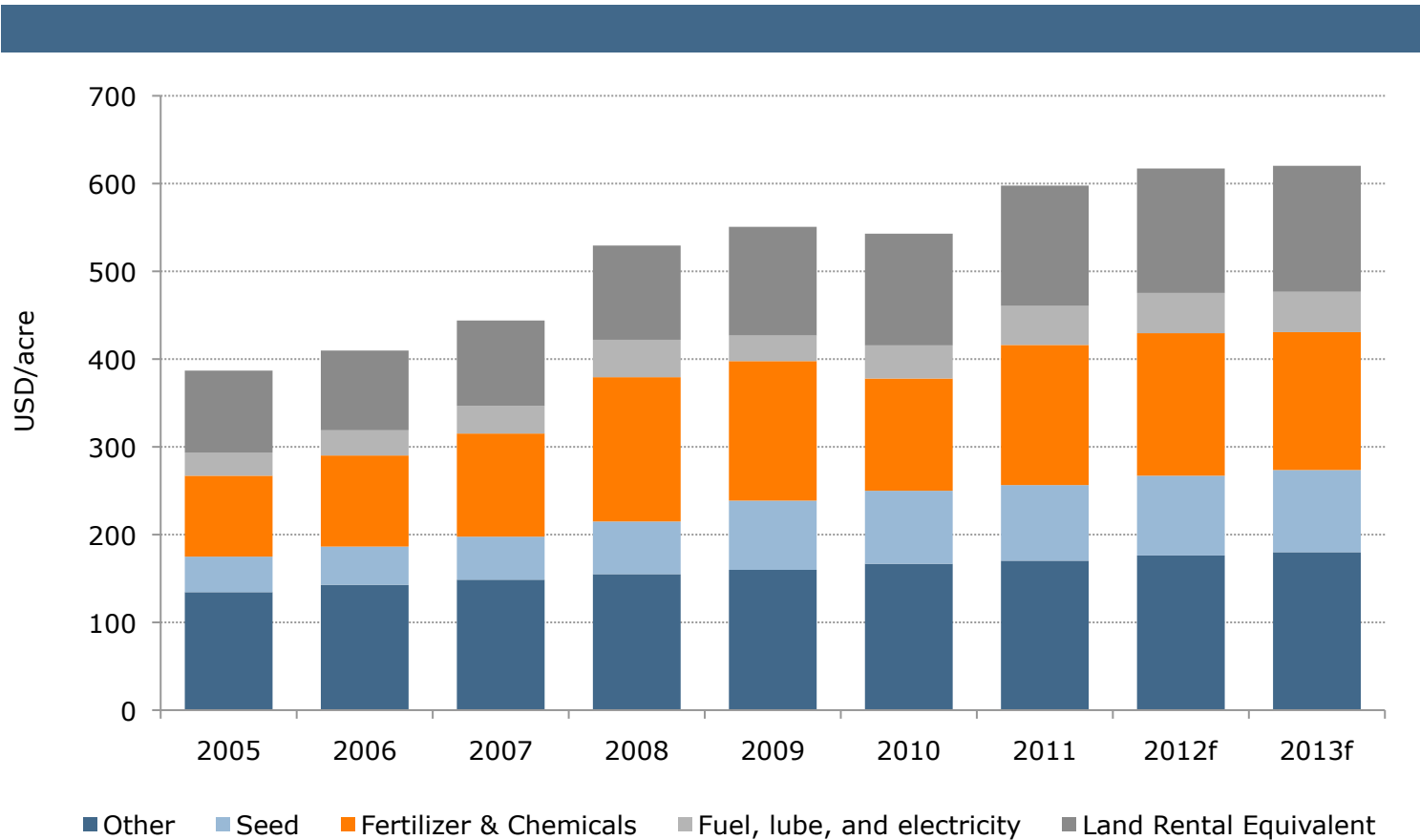
Iowa State estimates that yields for corn following corn (no rotation) are 15 bushels lower



Source: USDA, USGS, Rabobank, 2012

The price/cost relationship

US Corn Cost of Production



Source: USDA, Rabobank, 2012



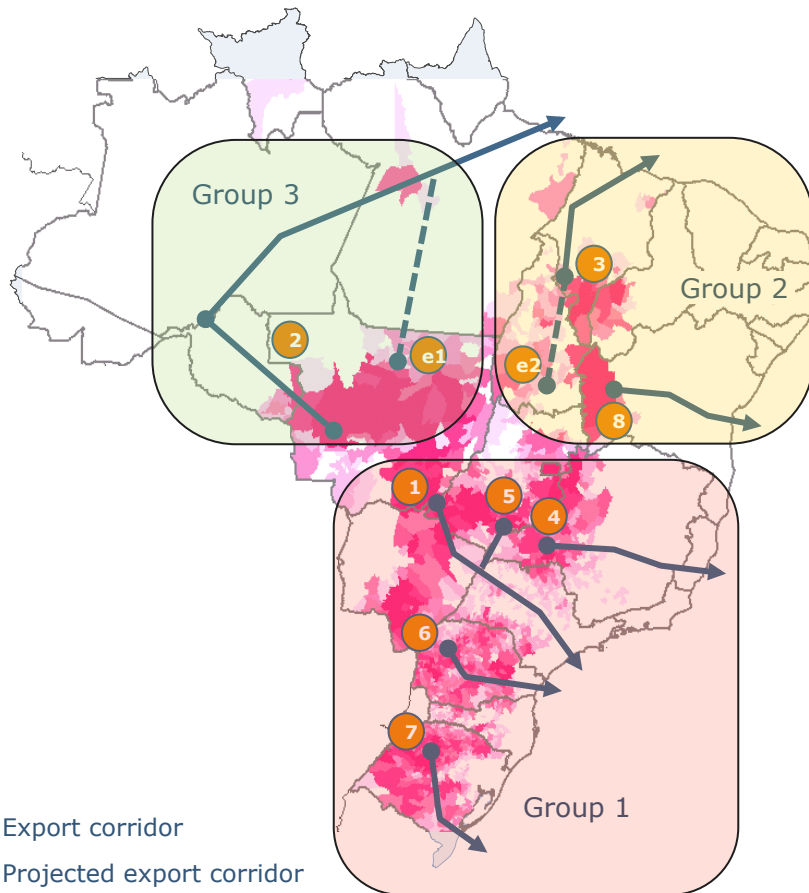
Brazil Logistics: Improving prospects



Rabobank International

Grains' Export Logistics Overview

We can further abstract these routes in 3 major groups:



Overview

Group 1: Traditional exporting routes;

Exports most of the grain produced in the Brazilian center-south.

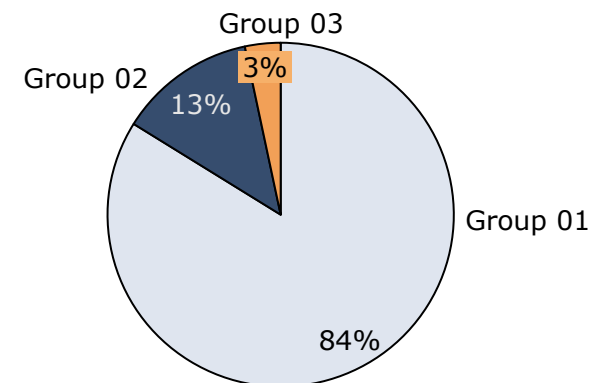
Group 2: MATOPIBA's exporting routes;

Has become increasingly important over the past decade.

Group 3: New riverway-based routes;

New (under development) routes that will attend for grain coming from N. MT

Share of soybean exports 2011

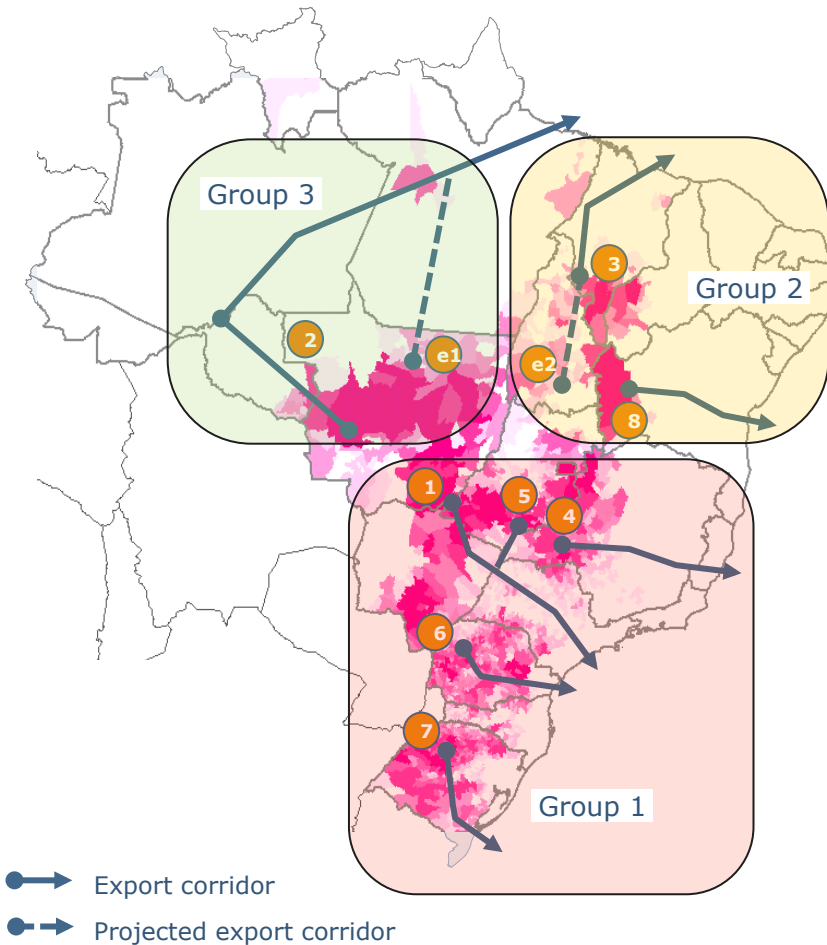


Source: Rabobank



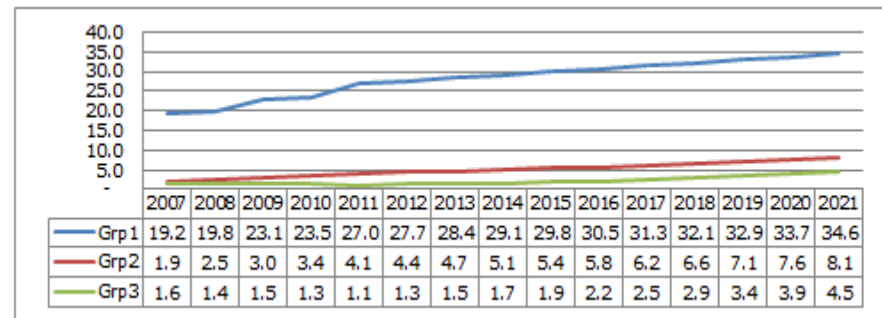
Grains' Export Logistics

Growth Forecast

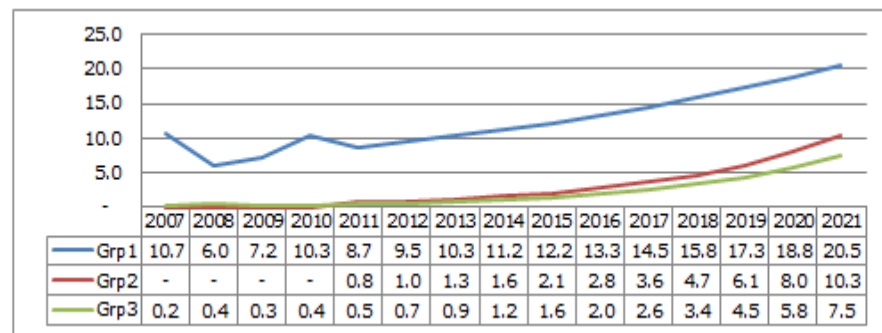


Source: Rabobank

Soybeans [million metric tons]



Corn [million metric tons]



Brazil Opportunities

Pork consumption will still be by far the main destination of the production in Brazil

Exports are expected to increase by a CAGR of 4% until 2022

Well above the 0.9% seen during the last 10 years

Consumption should remain growing at around 2% per year

Where could we be wrong?

Upside

-Exports may accelerate if part of the projected corn supply surplus is directed to pork production

-Demand grows much more than expected

Downside

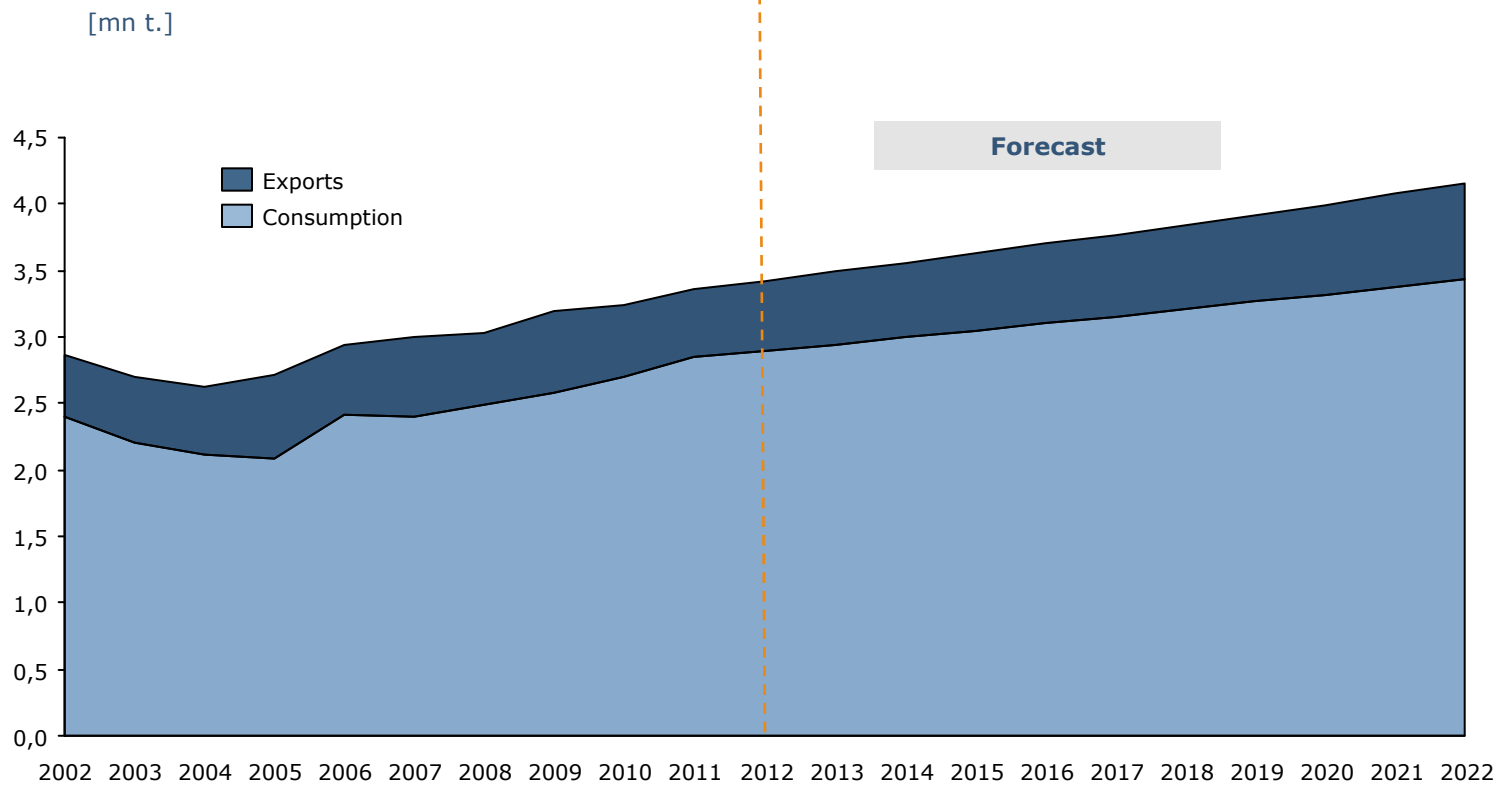
-Deceleration of the world economic growth

-Disease outbreak/ trade barriers

-China does not allow more plants to export

-Sales to Japan and South Korea do not take off

Pork domestic consumption and exports



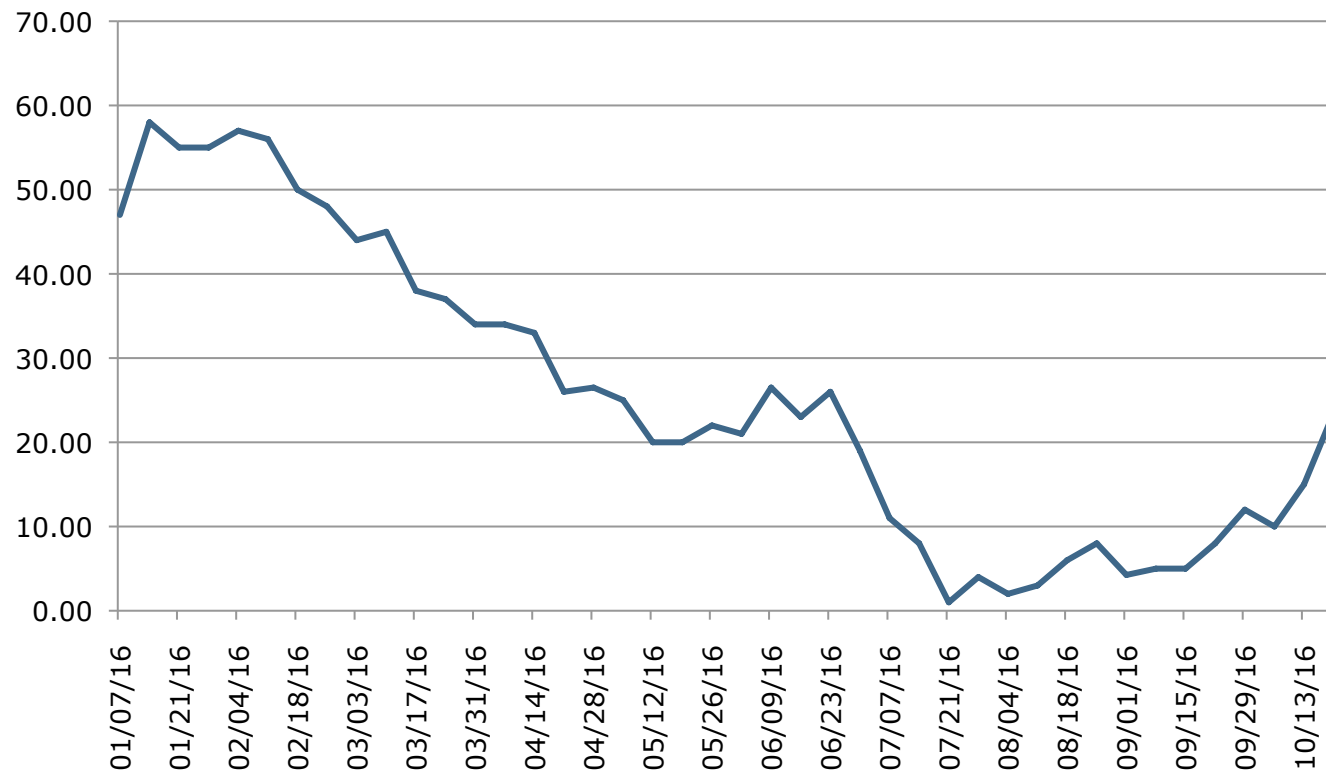
Source: UBABEF, Informa Economics, Raboban estimates



Signs of liquidation, then optimism

Feeder Pig Price

USD/head



Source: USDA, 2012

Note: Feeder pig = 10-12 lb early weaned pig

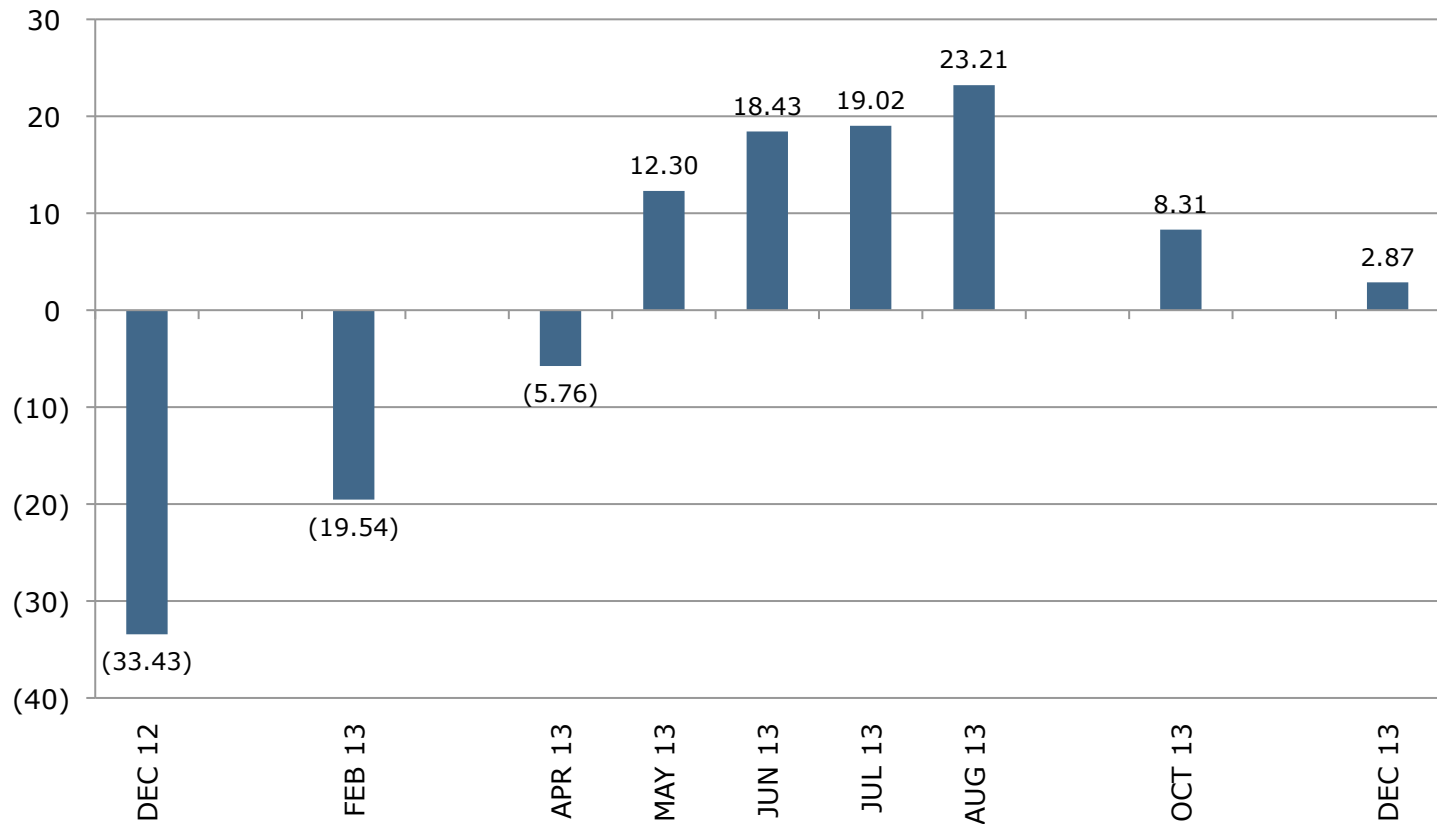


Producers at market are looking at large losses

US Hog Production Futures Curve

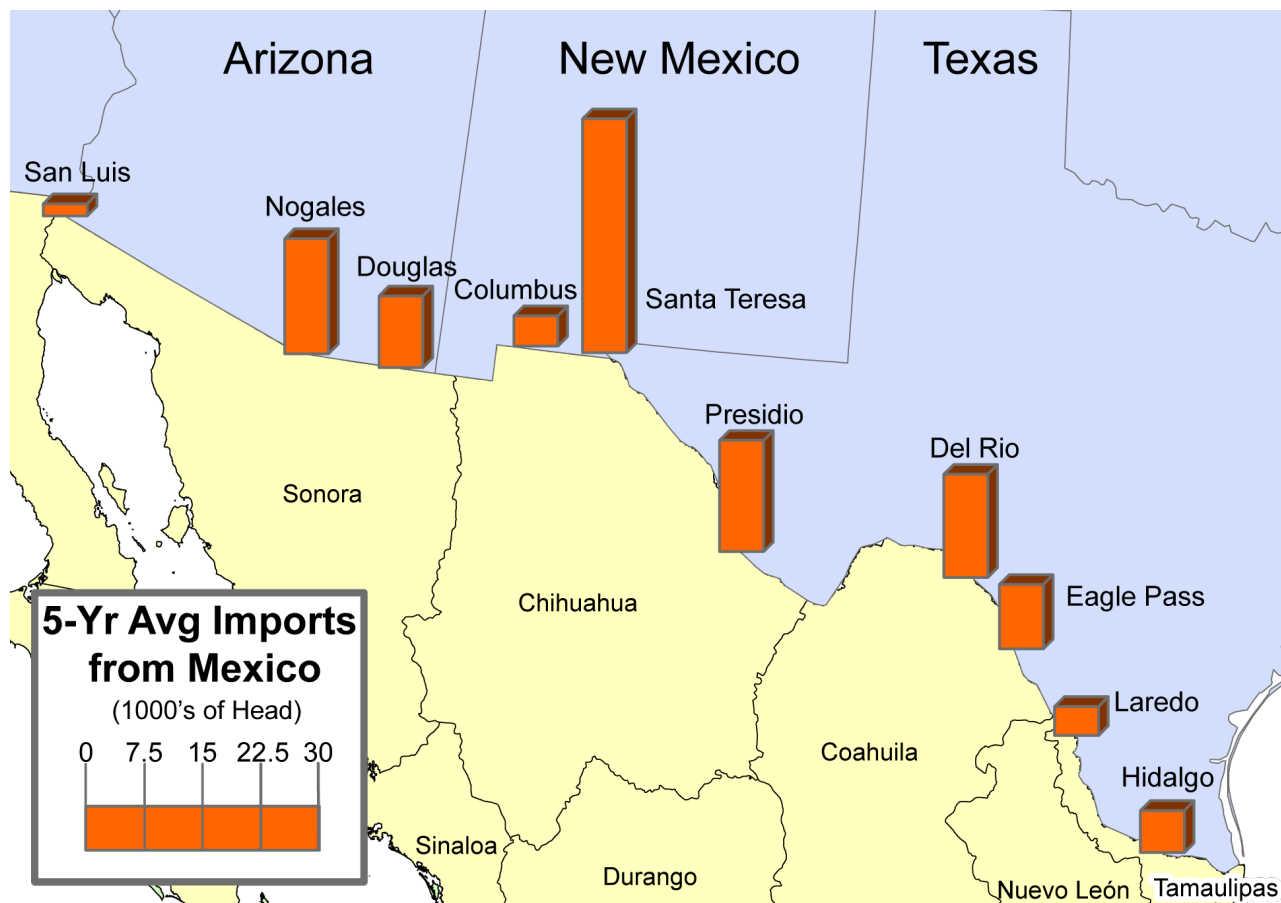
Producers that took advantage of forward markets were able to lock in strong summer profits, and limit losses into 2013.

USD/head



Source: Bloomberg, Rabobank, 2012





Source: USDA, 2012

