



What future food security means to the developing and developed worlds

Reshaping the industry in turbulent times

Nan-Dirk Mulder, 12 November 2014



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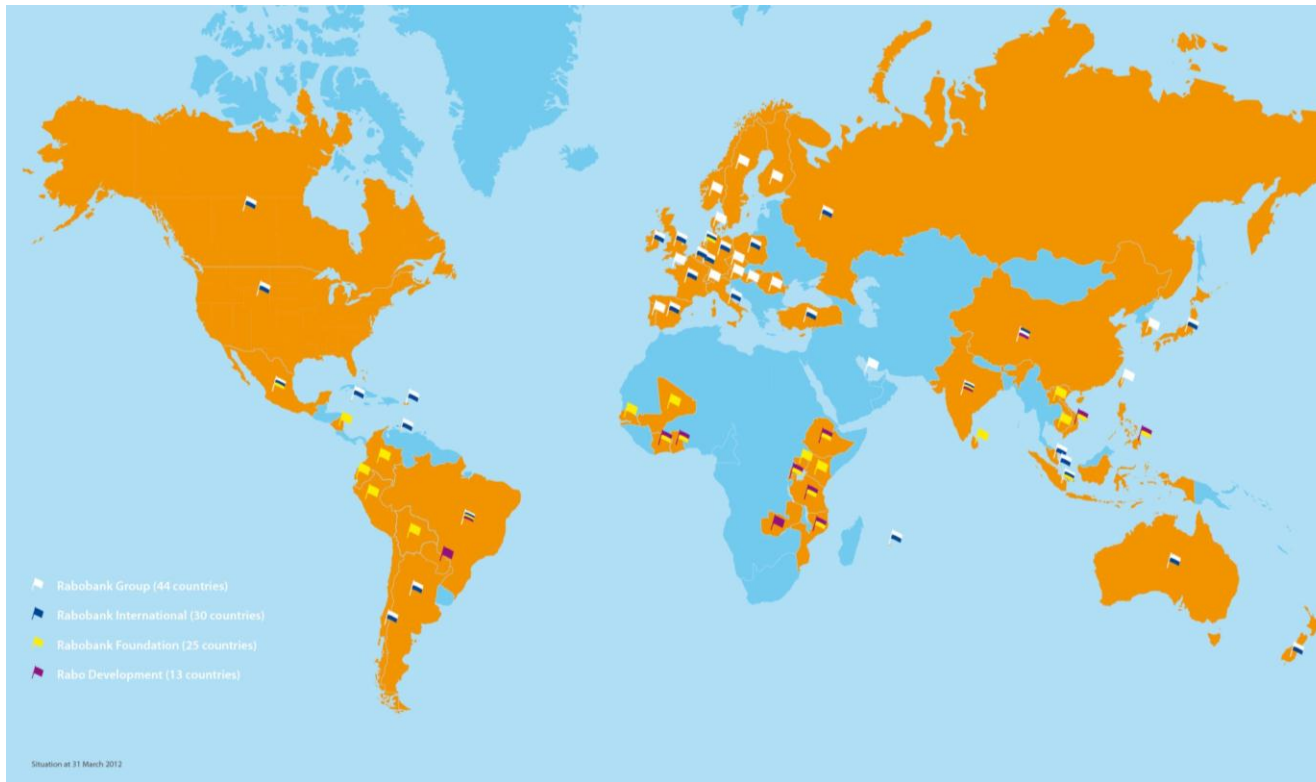


- 1. Long term global animal protein outlook***
- 2. The changing world: Asia as driving force***
- 3. Long term strategic outlook***

Rabobank: A leading global F&A bank



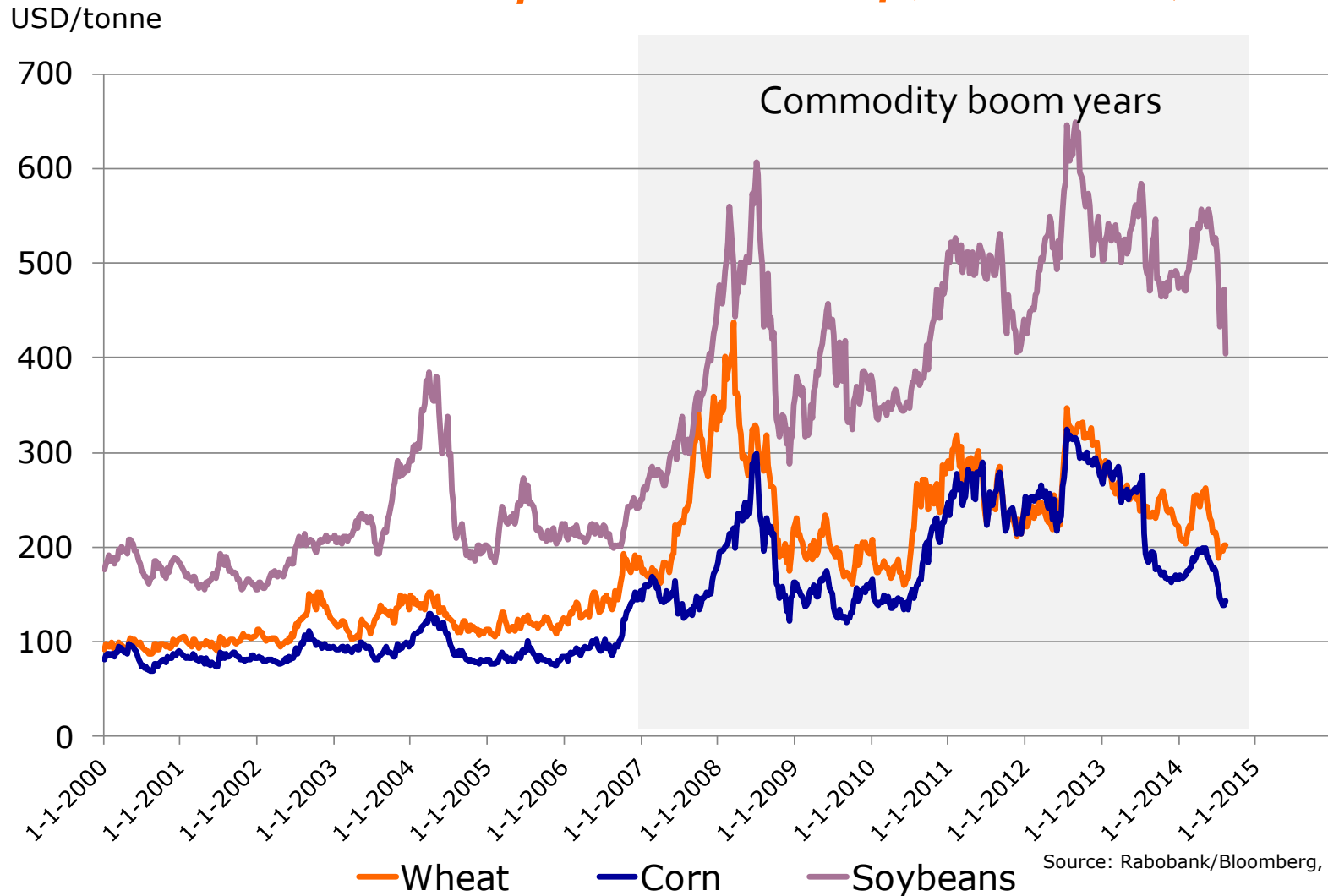
Rabobank group global presence



Grains and oilseed prices: A reflection of the new market reality

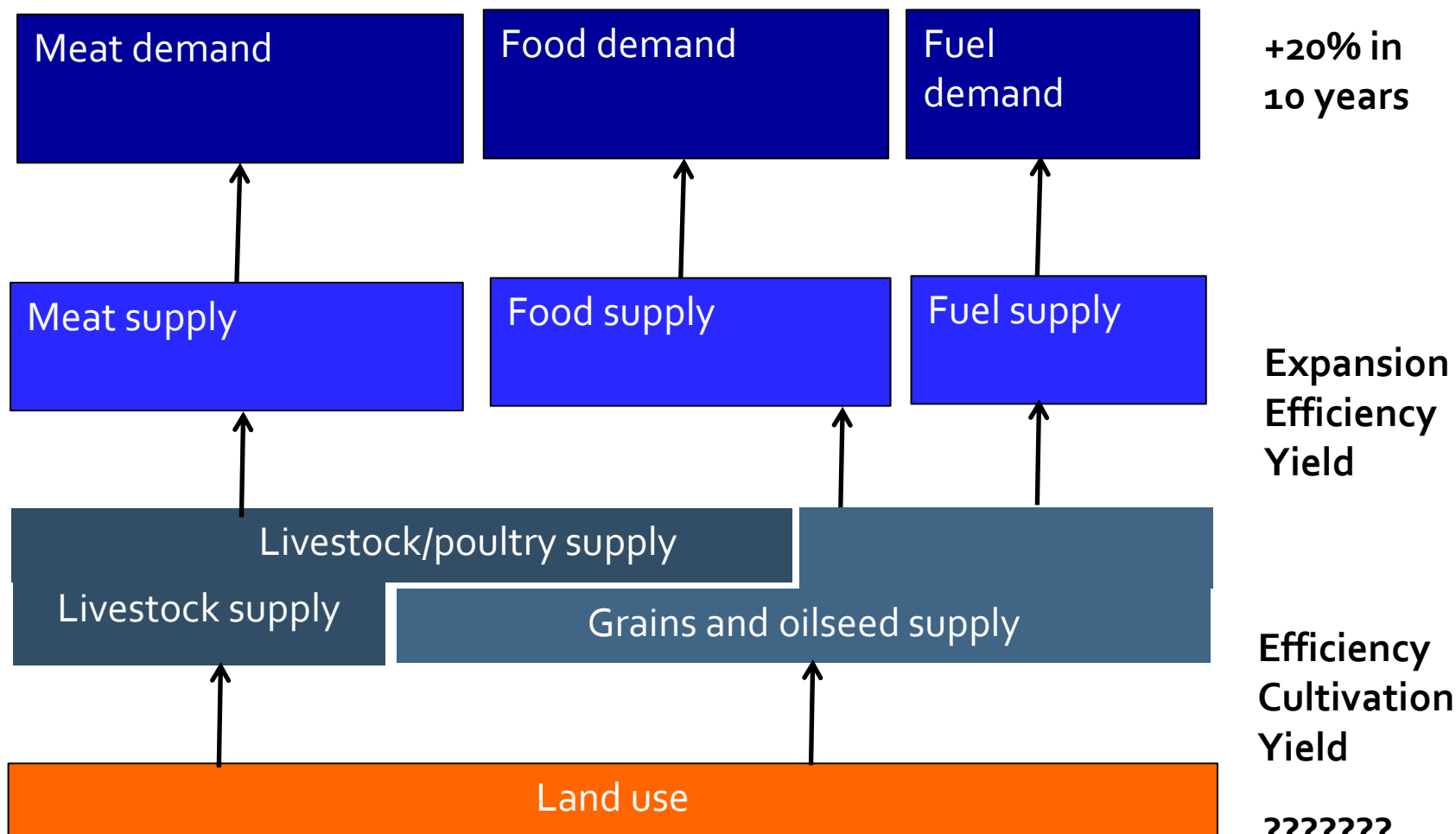


Grains and oilseed prices 2000-2014 (USD/tonne)

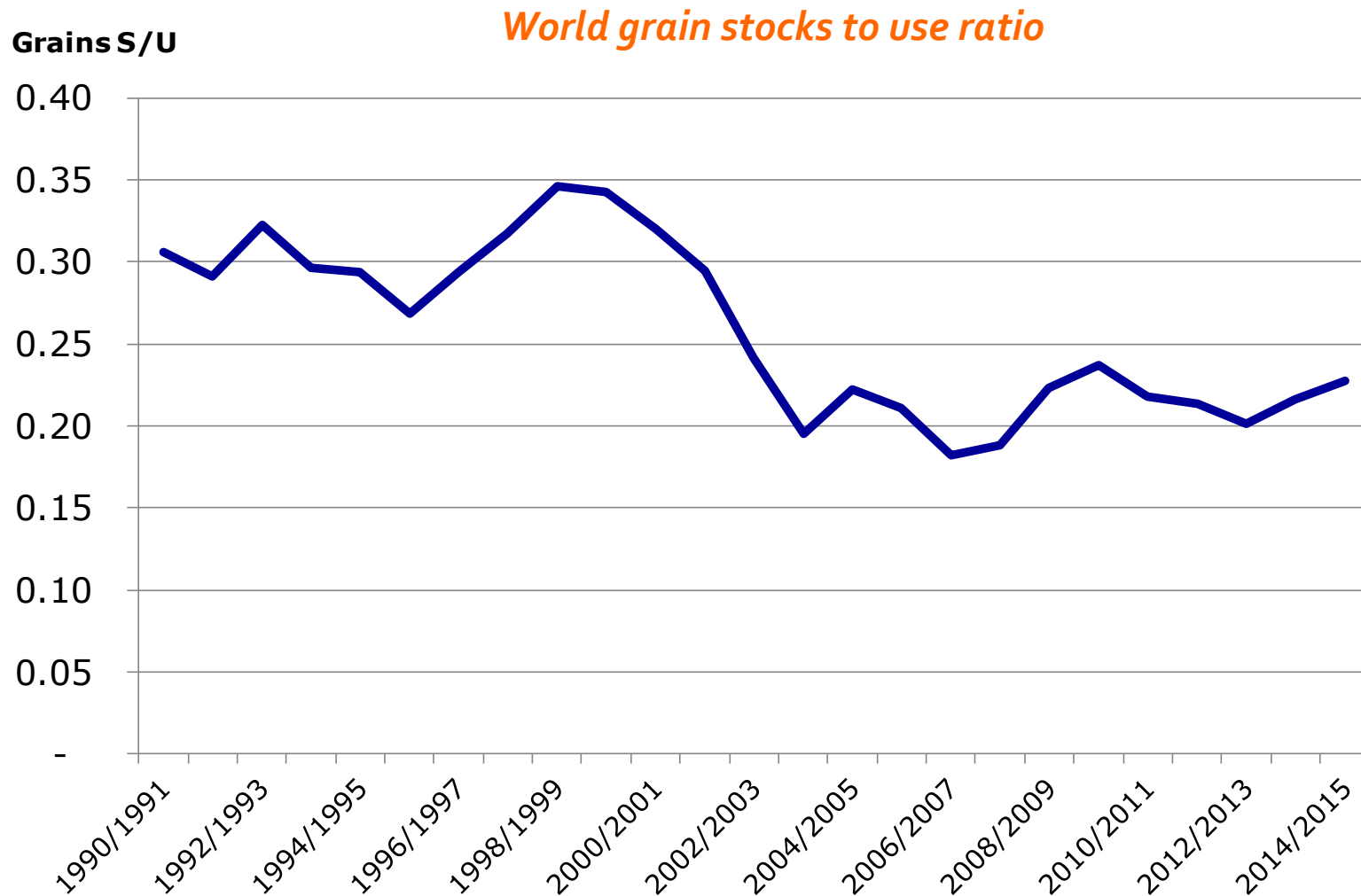


Source: Rabobank/Bloomberg, 2014

Why? Global food supply challenge: A bumpy road



Stocks dwindling as supply fails to keep up with demand

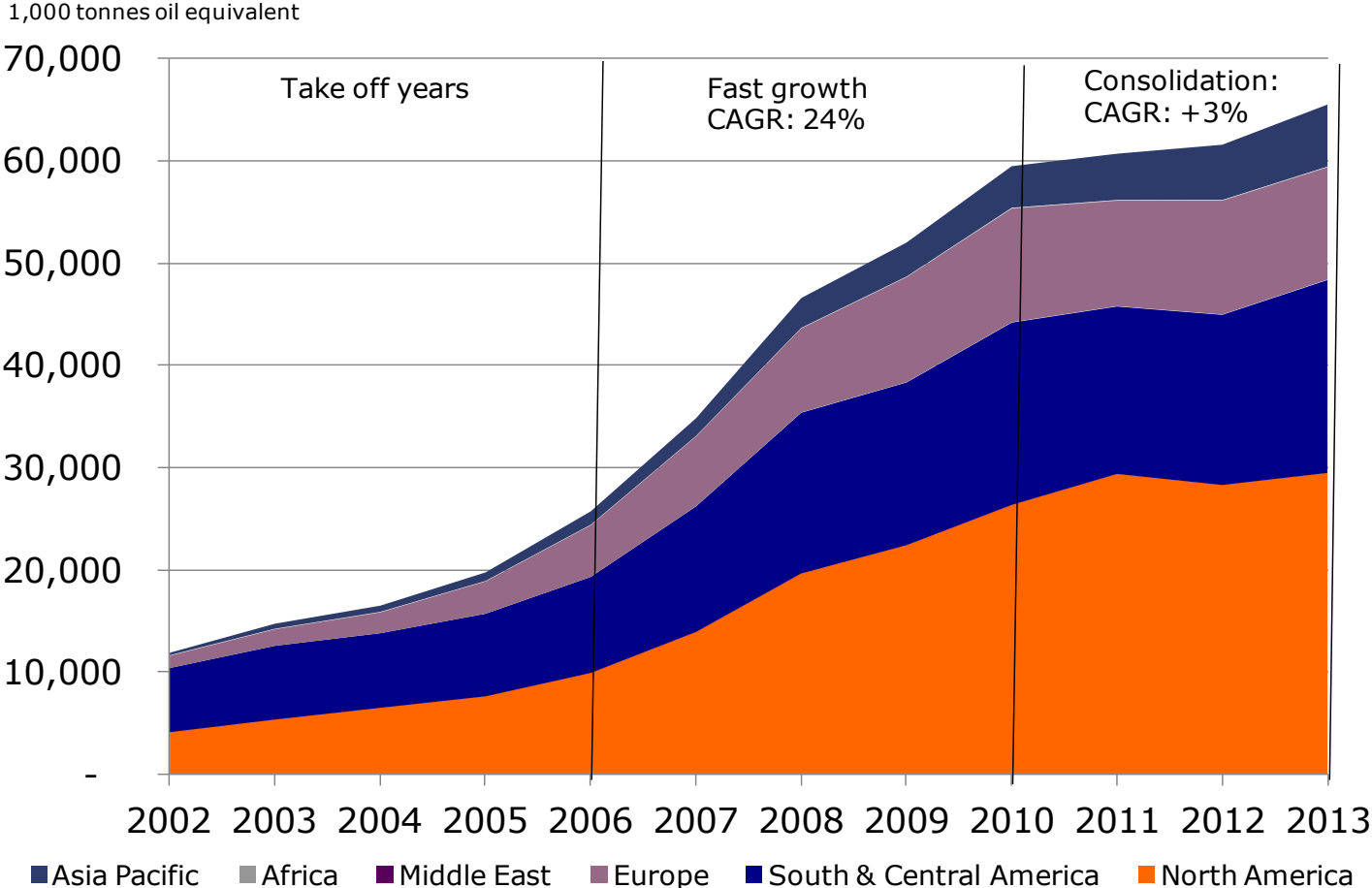


Source: Rabobank analysis/USDA, 2014

Biofuels at turning point



Global demand for biofuels



Source: BP, Rabobank analysis, 2014

Biofuels have a big footprint in global grains and oilseeds markets



Ethanol:

12% of global corn supply
(16% of sugar cane supply)



Animal protein

- Direct market impact
- By-product DDGS

Biodiesel:

17% of global soy oil supply
10% of global palm oil supply
25% of global rapeseed oil supply
1% of global sunflower oil supply



Animal protein

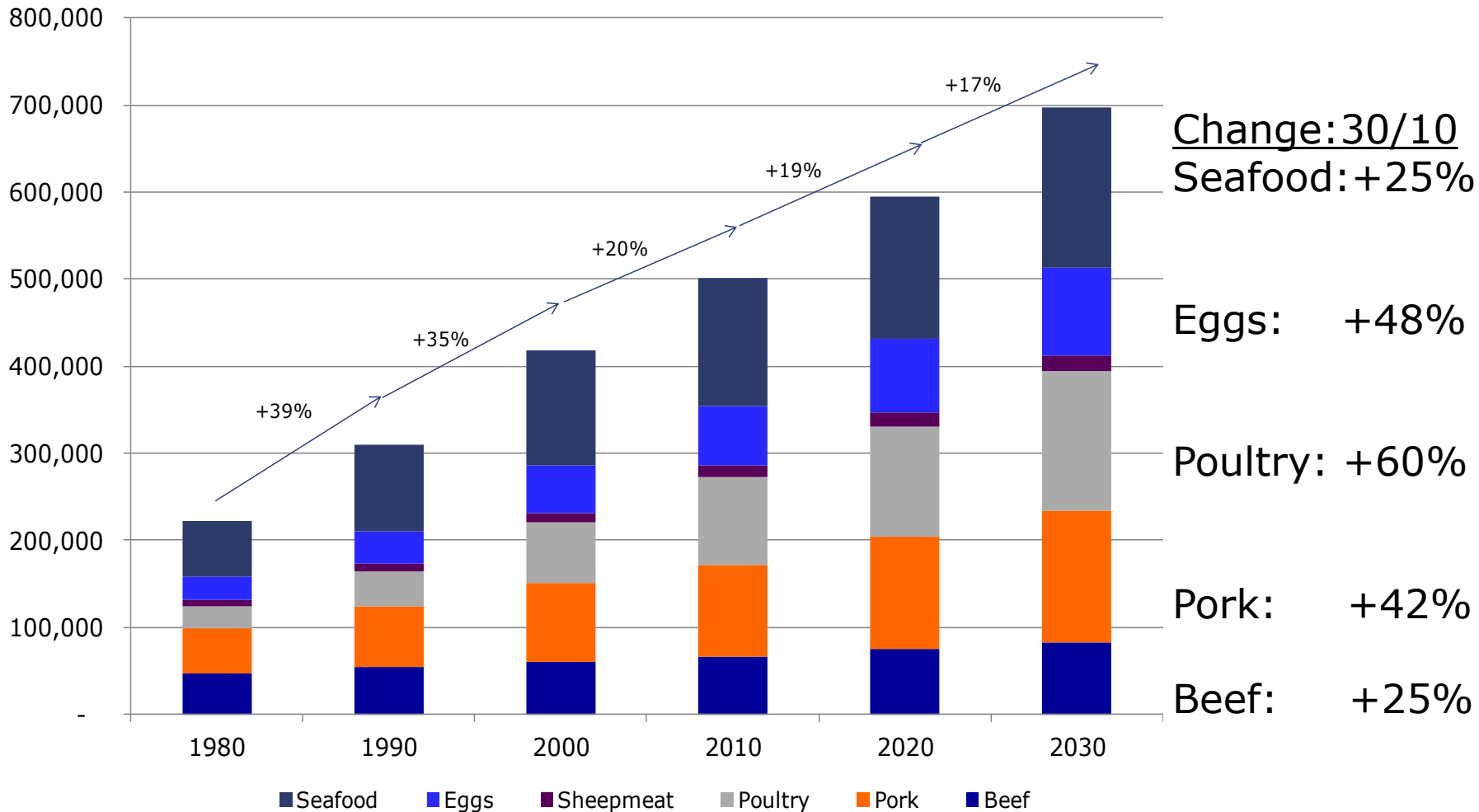
- Indirect market impact
- By-product Meals

Fast growth in animal protein: 45% more in 2030



Global demand for animal protein

X 1,000 tonnes

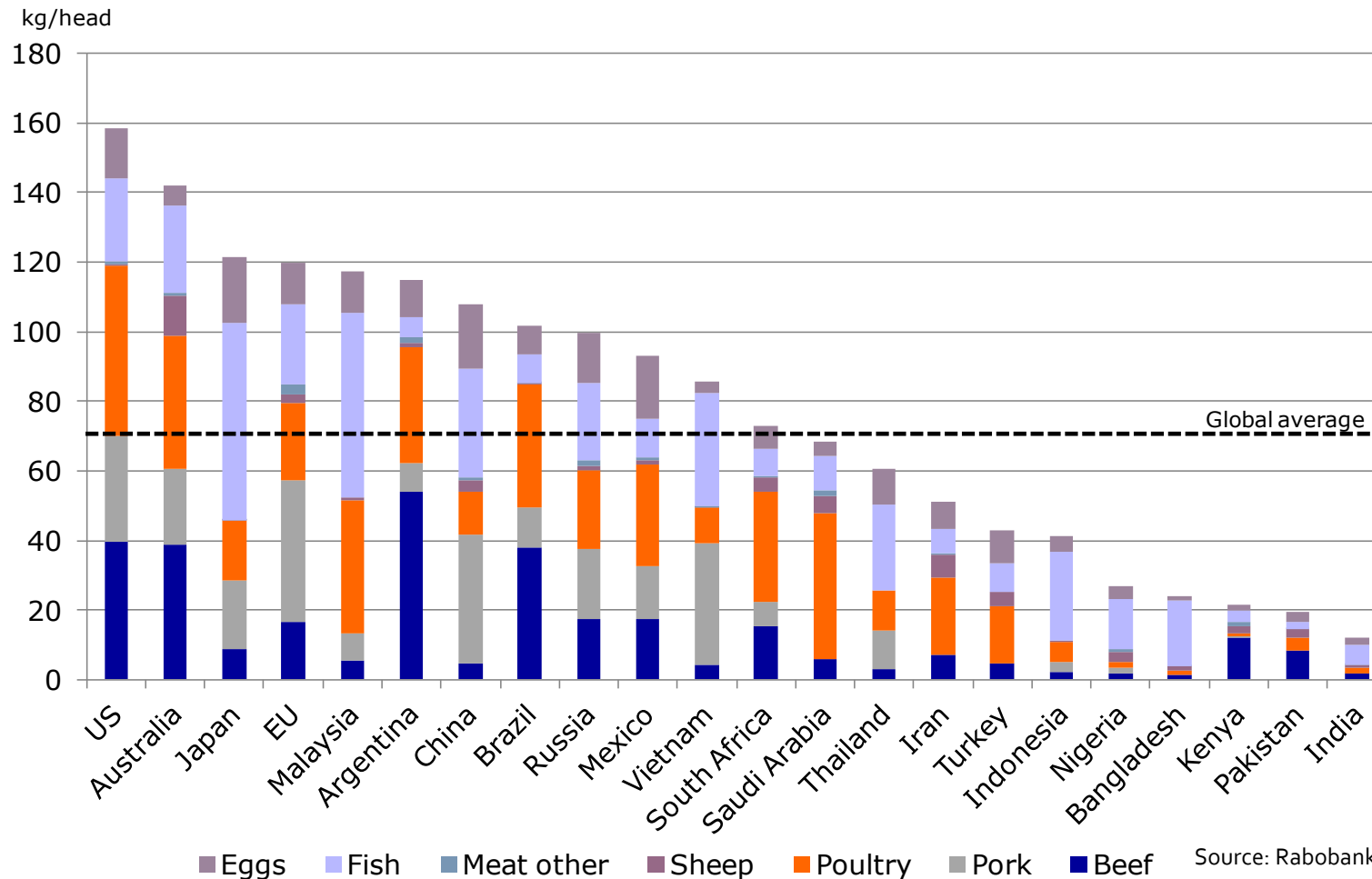


Source: Rabobank, FAO, OECD, FAPRI

Income growth leads to higher animal protein consumption



Per capita animal protein consumption in 2010

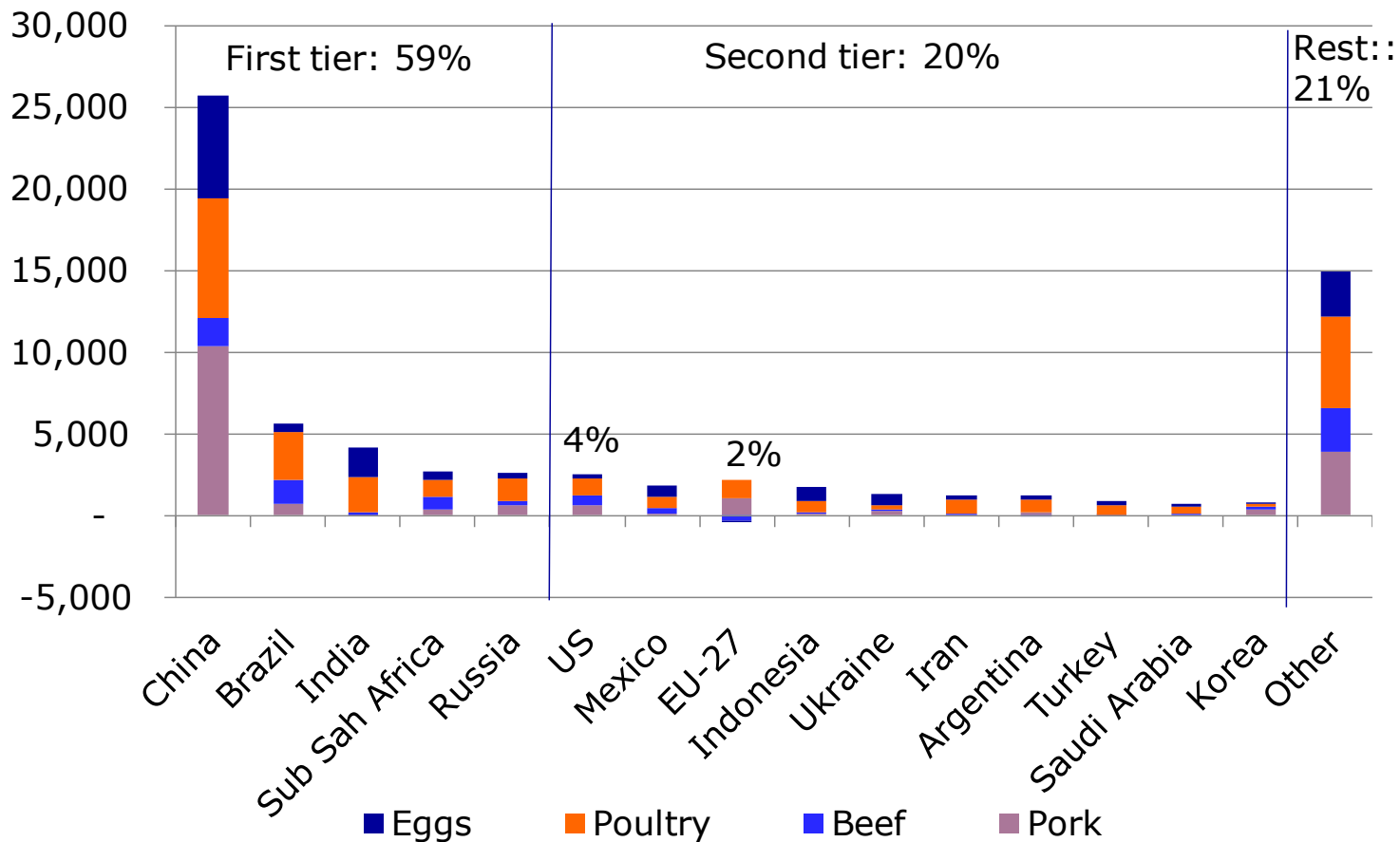


65% of global meat and egg demand growth is in Asia



Market growth estimate for key meat markets 2013-2023

1,000 tonnes

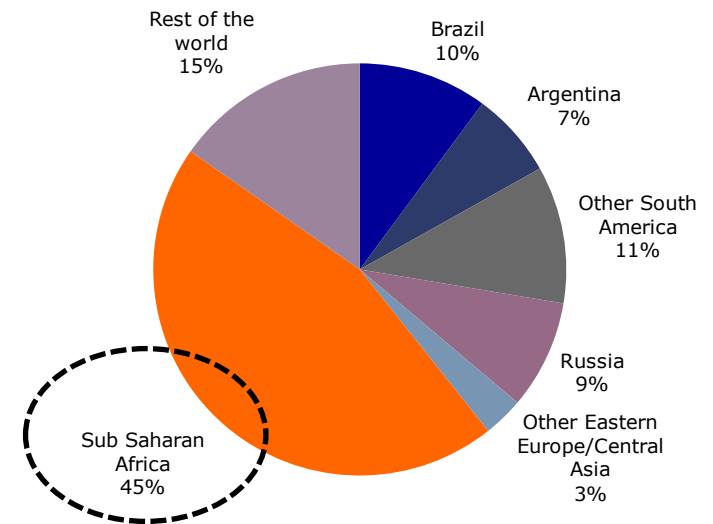
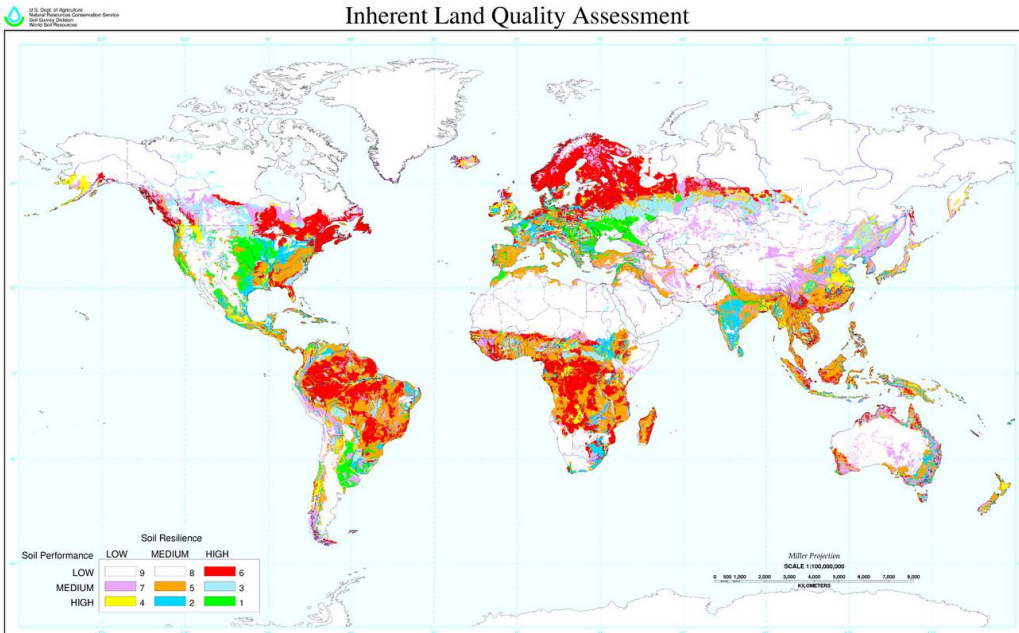


Asia lacks adequate resources, Africa has plentiful



Global land quality assessment

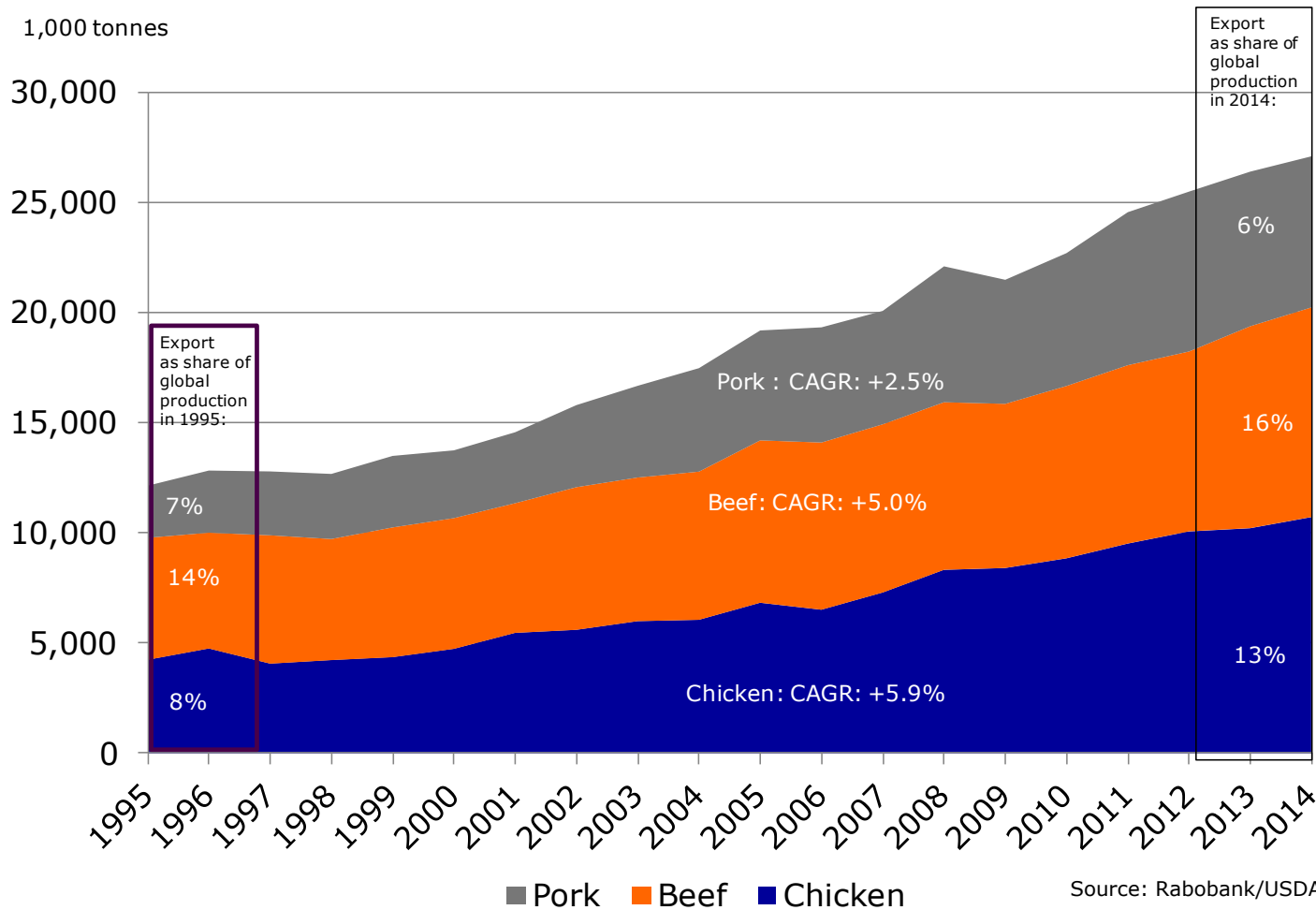
Available agricultural land



More global trade



Global meat and poultry trade 1995-2014*



Content

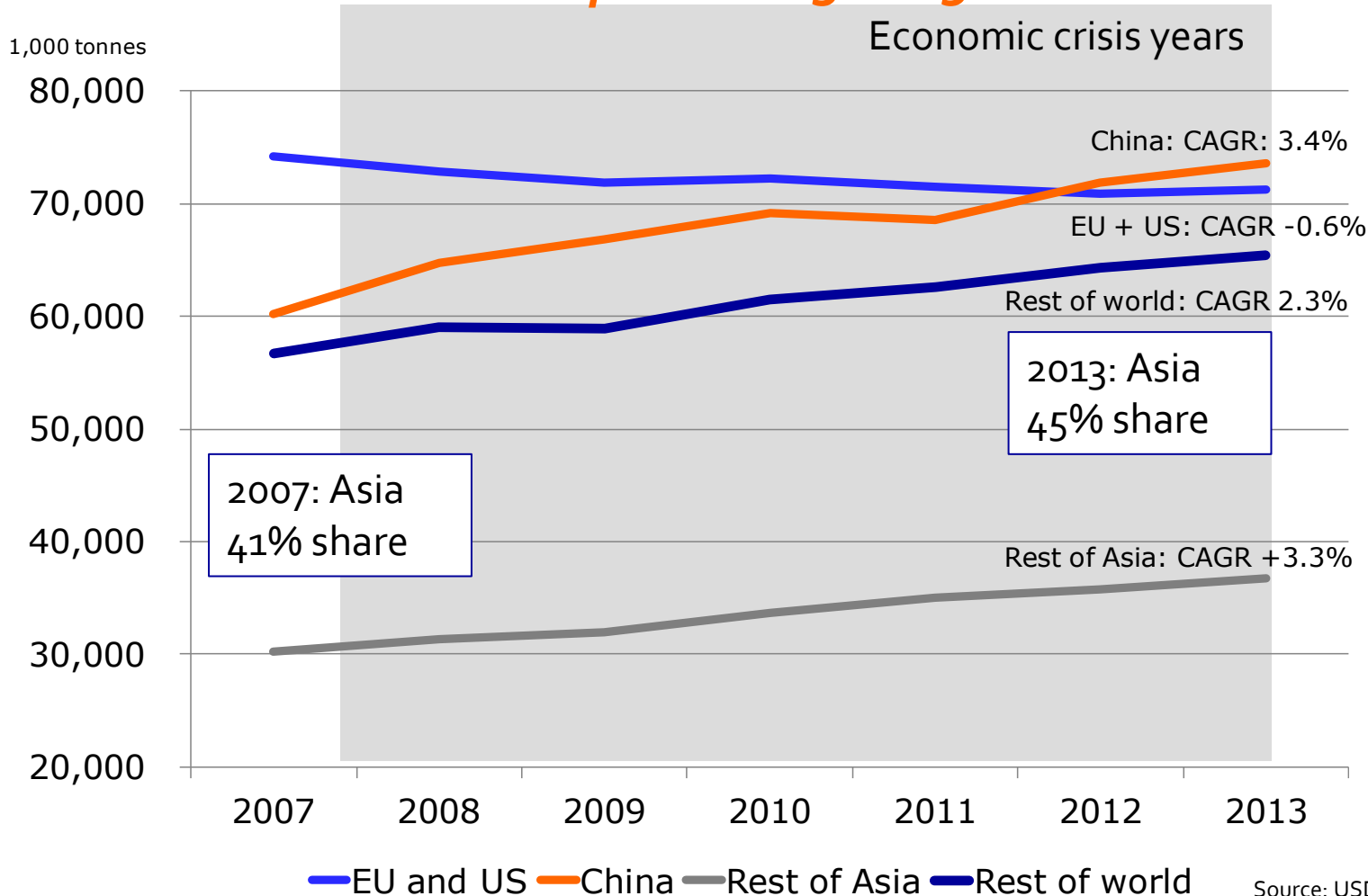


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Global change: growth in emerging markets, decline in the West



Global meat consumption 2005-2013: CAGR +2.1%



Different dynamics in industry in emerging and Western markets



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ECONOMIC TAKE-OFF
Food as a need

Income: < \$ 5,000



Time free

corporate
social
responsibility



EU plus
Western
countries

ECONOMIC REINVENTION
Food as stimulation

Income: > \$40,000



Location Bound

Location free

BRIC industry
growth



Source: Rabobank

Income: \$ 5,000 - \$15,000

Income: \$15,000 - \$40,000

ECONOMIC DEVELOPMENT
Food as a social occasion

Time bound

ECONOMIC CONSOLIDATION
Food as nutrition/well-being

Western markets: consumer concerns to change industries



Food safety



Horsemeat scandal: Silvercrest factory is sold by ABB Food Group

The European scale of the horse meat scandal

The horse meat scandal will have far-reaching effects, regardless of whether it turns out to have been the result of criminal activity, food contamination

Horsemeat scandal: Tesco drops supplier over horsemeat in value burgers

Animal welfare

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Germany's Chicken Wars

The Controversial Practices of Poultry Mega-Factories

By Nils Klawitter



Photo Gallery: 7 Photos

REUTERS

Industrialized chicken farming has become a booming business in Germany, delivering hundreds of millions of birds a year to customers around the world. But the methods they use are controversial -- and opposition is growing.

A turkey chick is fighting its way into life, hatching somewhat more slowly from its shell

Buy local

TESCO PLC Share price 20 May 2013 at 13:02 **383.05p**

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18 May, 2013

Tesco to offer customers in Scotland 100% Scottish chicken

[f](#) [t](#) [in](#)

Tesco stepped up its support for Scottish agriculture today by offering customers in Scotland 100% fresh Scottish chicken.

The commitment will see the retailer offer Scottish-reared chicken in each of its ranges

Environment friendly



Weekly Review

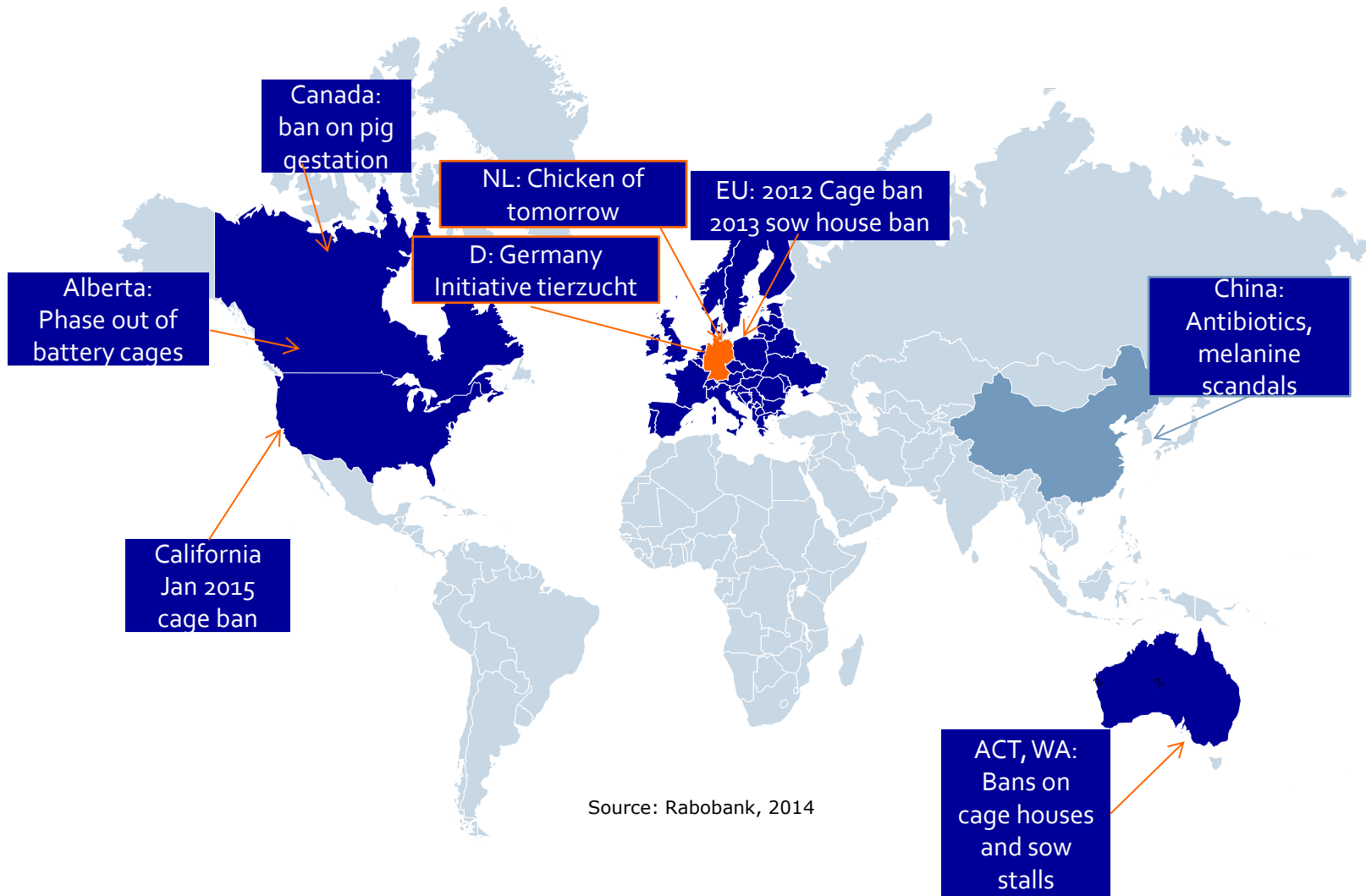
From the Amazon to chicken nuggets

John Vidal
[Guardian Weekly](#)

A handful of the world's largest food companies and commodity traders, including the McDonald's fast-food chain, are driving illegal and rapid destruction of the Amazon rainforest, according to a six-year investigation of the Brazilian soya bean industry.

Source: Rabobank, 2014

Consumer concerns to drive global change in business models

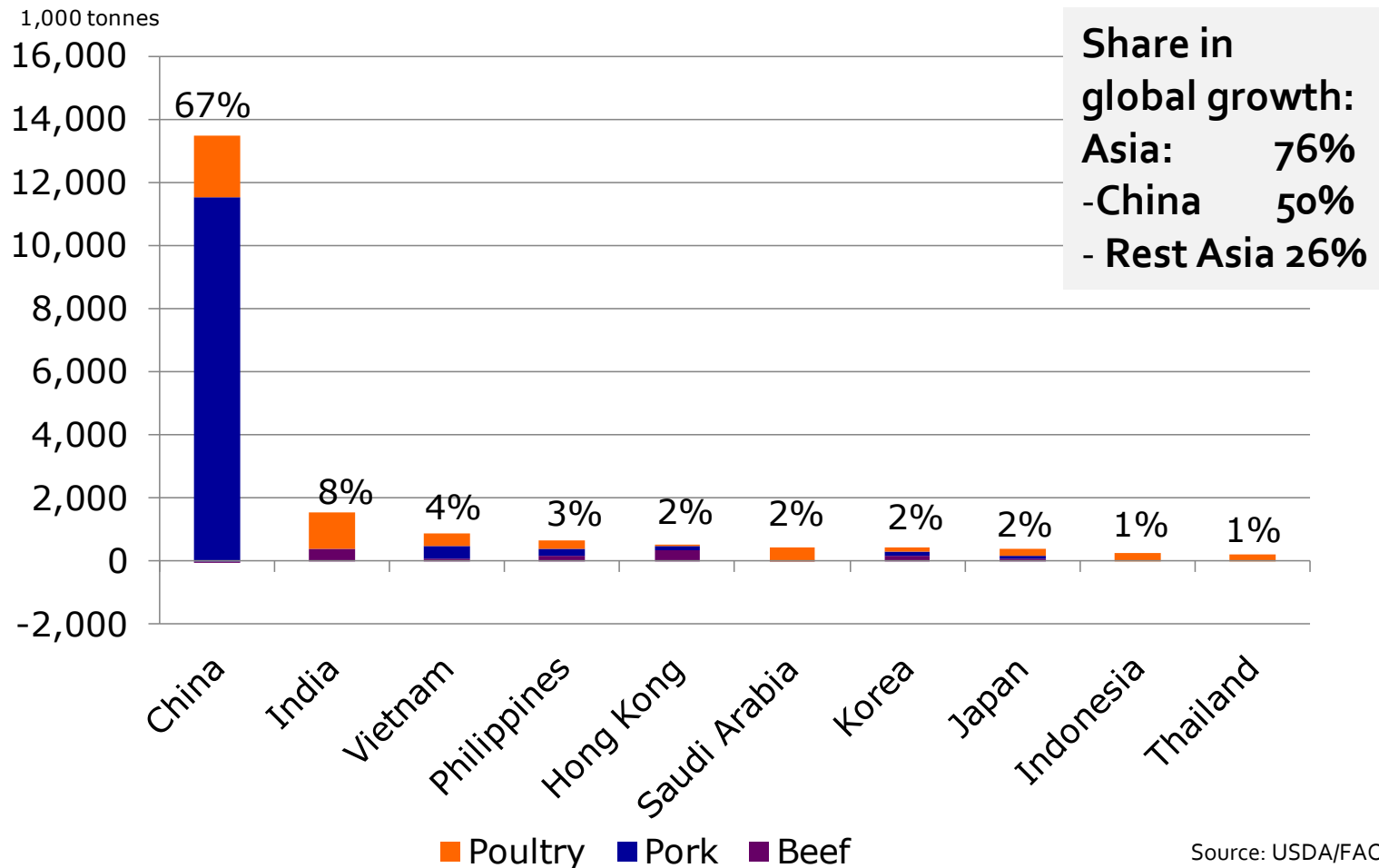


Source: Rabobank, 2014

Asia drives global growth: 67% of growth is in China



Consumption growth by BRIC country 2007-2013

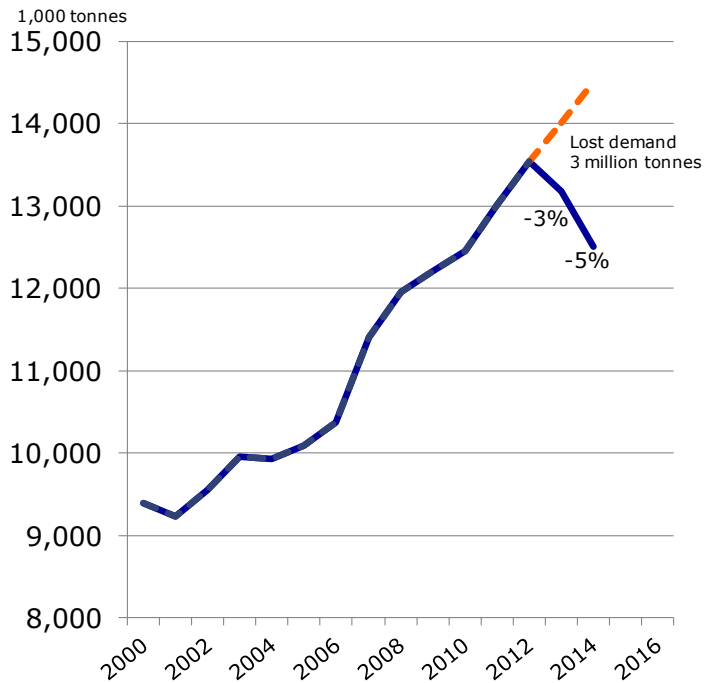


China as emerging market example of increasing consumer concerns

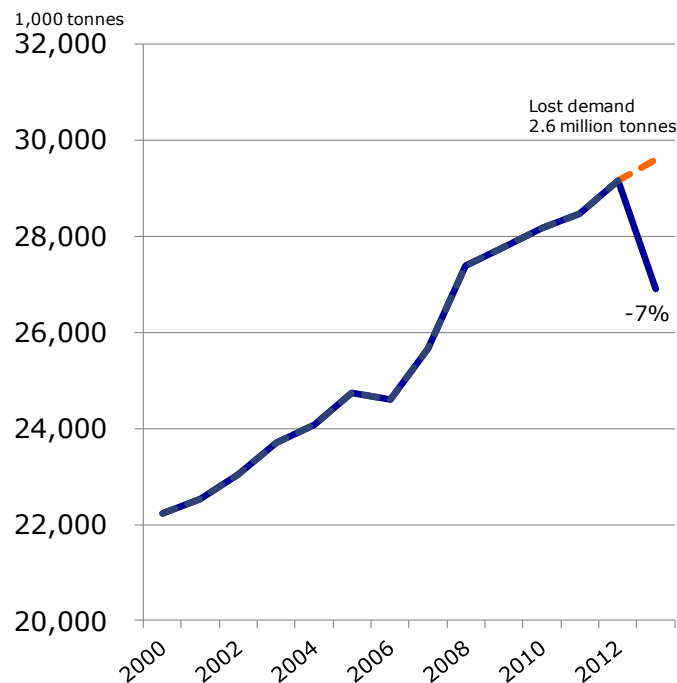


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China chicken consumption China egg consumption



Source: Rabobank/USDA, 2014



Source: Rabobank/USDA, 2014

Antibiotics scandal



H7N9 outbreaks



QSR food scandal

McDonald's to boost China supplier audits after food safety scandal



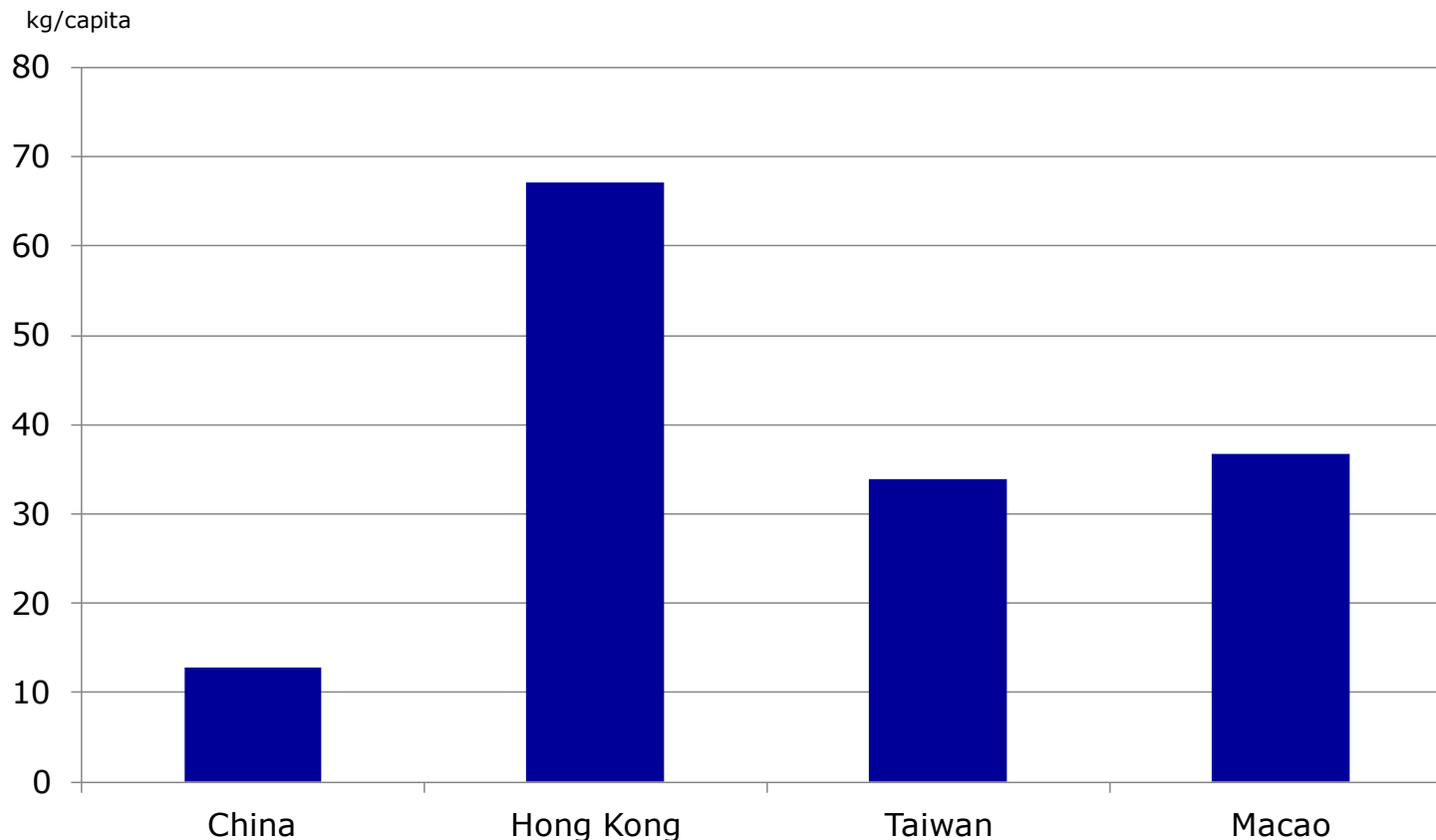
McDonald's to boost China supplier audits after food safety scandal

Will China recover?

Yes, and growth will be fast



Chicken consumption China versus HK, Taiwan and Macao



Source: Rabobank, FAO, 2014

Only one solution: Modernization of the industry



Higher incomes



Modern distribution



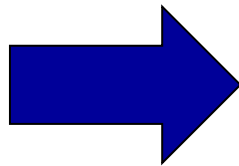
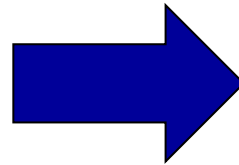
Food safety



Animal disease threat



High feed prices



Modern value chain

Larger companies

Vertical integration

Efficiency

Yield

Value chain management

Sustainability

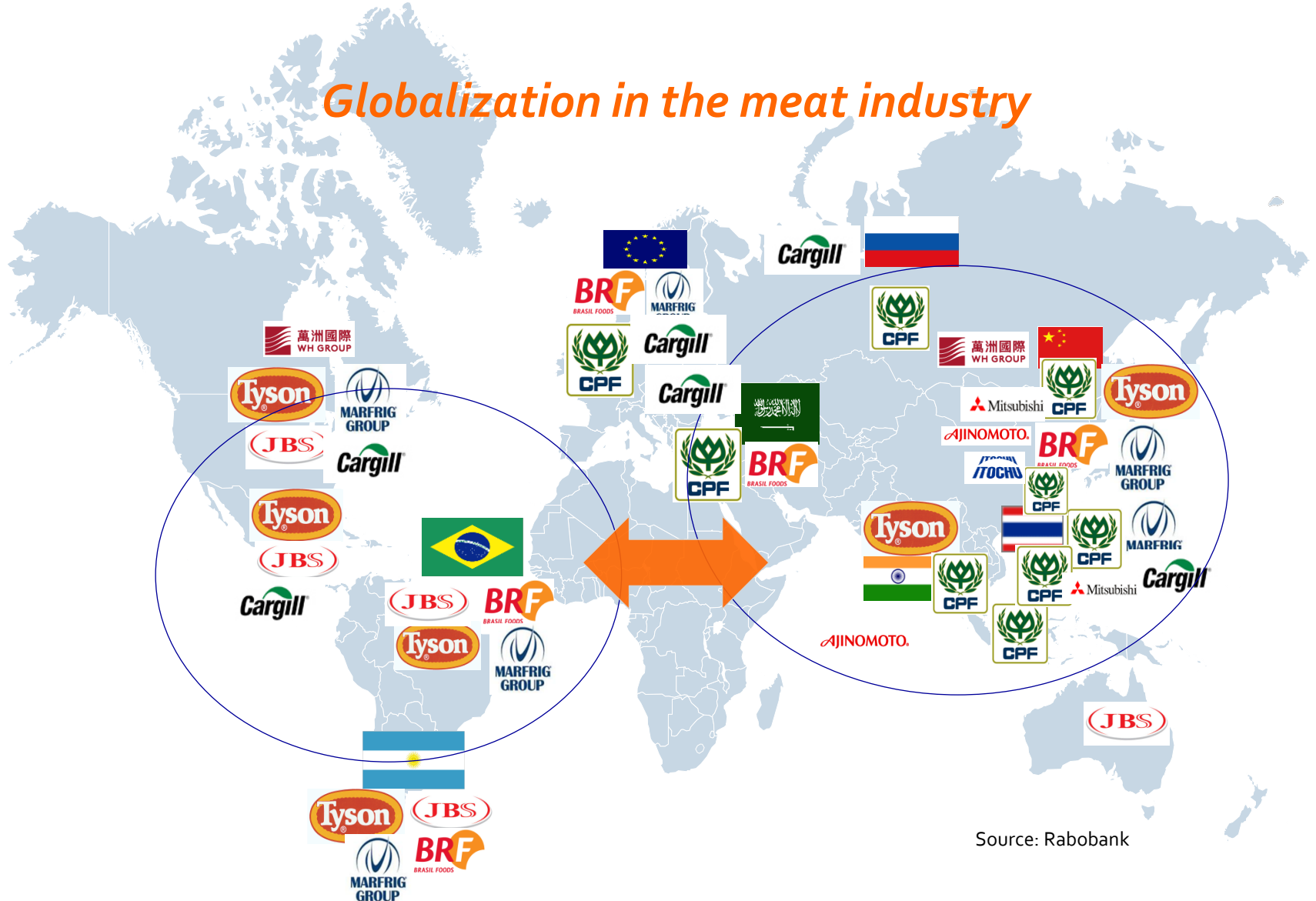


Source: Rabobank

Setting up global supply chains



Globalization in the meat industry



Source: Rabobank

Strategic global food security will change industries



Rabobank

Chinese firm announces joint venture in Ukraine

By Vladislav Vorotnikov, 01-Oct-2013

Related topics: Industry & Markets, Livestock, Financial, Pork, China

Chinese company Xinjiang Production and Construction Corps (XPCC) has entered into a joint venture with Ukrainian firm KSG Agro to launch a large-scale project for the production of pork and feed

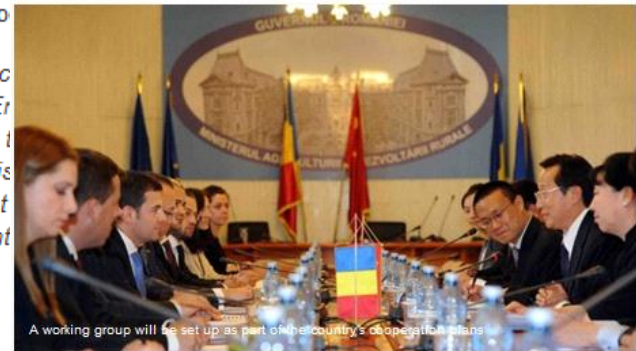
USD 2.6 billion investment

include the construction of several large-scale projects. The joint venture will have a total production capacity of 900,000 pigs and 100,000 sheep. Romania and China keen to develop livestock cooperation



By Georgi Gyton, 11-Jun-2014

Post a comment



A working group will be set up as part of the country's cooperation plans

Related tags: Daniel Constantin, Han Changfu, MARD, Ministry of Agriculture and Rural Development, Romania, China, Livestock, Victor Ponta, Li Keqiang

Related topics: Industry & Markets, Livestock, Beef, Pork, Lamb, Others, China

Senior government officials from China and Romania have agreed that livestock is a priority area for cooperation between the two countries.

Earlier this month, Chinese Minister of Agriculture Han Changfu, met with Daniel Constantin, Romania's Deputy Prime Minister and Minister of Agriculture and Rural Development, as part of an official visit to the country.

RELATED NEWS:

Romania to export sheepmeat to China

The Smithfield, Shuanghui Pork Deal Is Done

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By LEONEDA INGE

Pork processor Smithfield Foods has officially been sold. It is reportedly the largest purchase ever of a US company by a Chinese company.

Today 96% of Smithfield Foods shareholders voted to sell the pork processor to Shuanghui International Holdings Ltd. of Hong Kong. The deal is worth \$7.1 billion.

Smithfield, headquartered in Virginia, owns the largest hog processing plant in the world.

USD 7.1 billion investment



Ukraine is rich in arable land

By Alex Spillius, Diplomatic Correspondent

It would be the biggest so-called "land grab" agreement, where one country leases or sells land to another, in a trend that has been compared to the 19th century "scramble for Africa", but which could now spread to the vast and fertile plains of eastern Europe.

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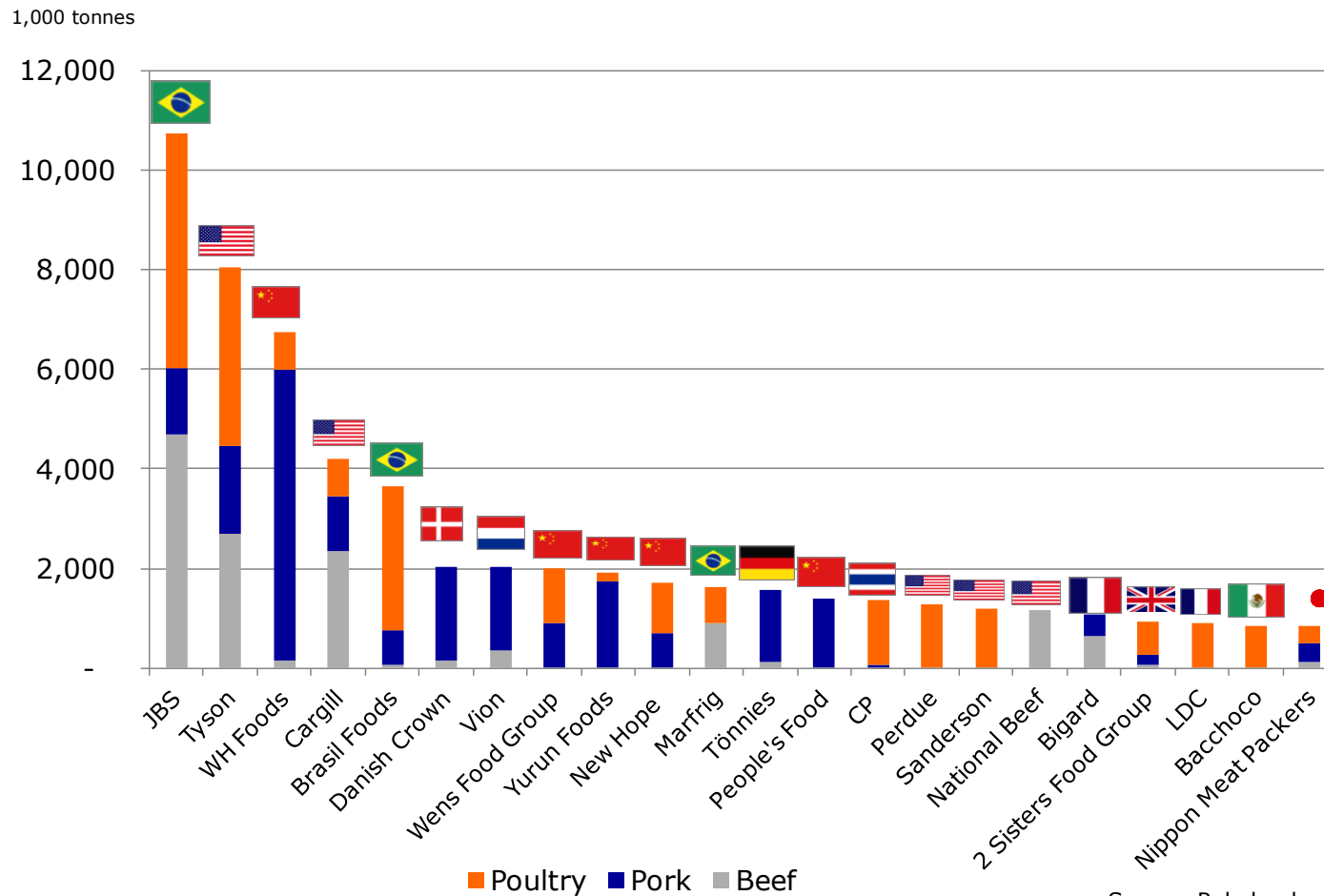


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Companies from emerging markets drive industry globalisation



Global ranking of top 20 meat companies by volume



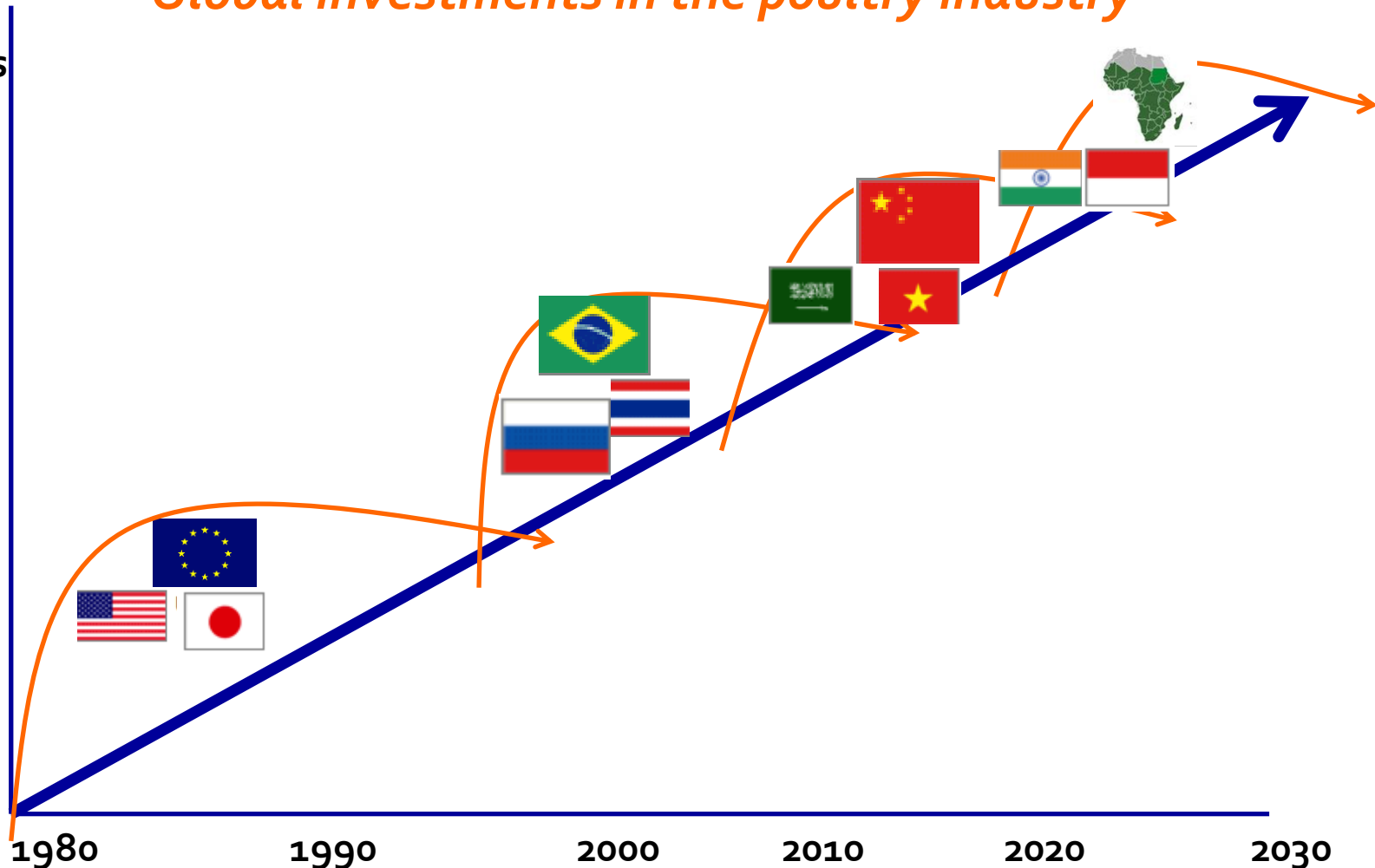
Source: Rabobank

Towards the Asian and African decades in poultry development



Global investments in the poultry industry

Global investments

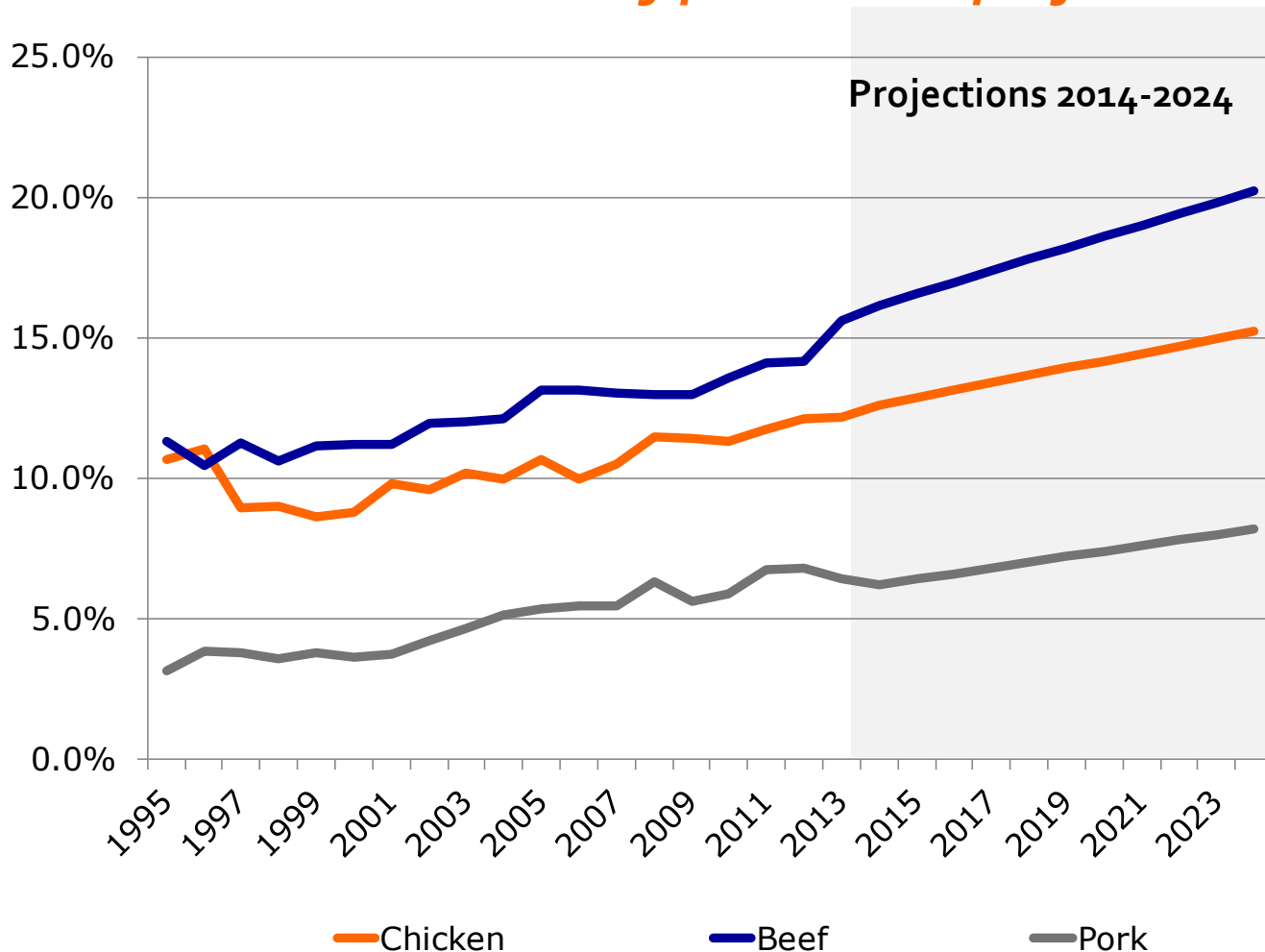


Source: Rabobank, 2014

Importance of trade will grow fast



Global trade as share of production projections

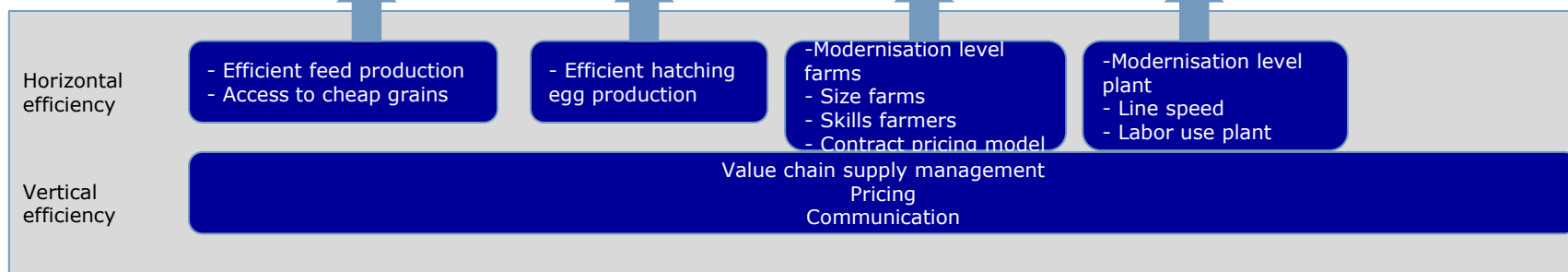


Source: Rabobank, USDA, 2014

Optimal efficiency more important as ever before



| | Compound feed price (EUR/100 kg) | DOC Price (EUR/100 kg) | FCR | Live weight | Wages EUR/hr | Processing costs | Total cost whole chicken |
|----------|----------------------------------|------------------------|------|-------------|--------------|------------------|--------------------------|
| Poland | 34.5 | 31.1 | 1.76 | 2.3 | 5 | 25 | 154 |
| Germany | 34.5 | 31.1 | 1.68 | 2.2 | 15 | 31 | 164 |
| France | 32.8 | 32.8 | 1.75 | 1.9 | 20 | 35 | 170 |
| Italy | 40.1 | 35.5 | 1.85 | 2.5 | 13 | 30 | 182 |
| US | 25.7 | 19.6 | 1.93 | 2.5 | 17 | 32 | 133 |
| Brazil | 26.5 | 27.0 | 1.80 | 2.1 | 3 | 22 | 119 |
| Russia | 33.9 | 32.3 | 1.81 | 2.5 | 2 | 22 | 153 |
| Thailand | 32.9 | 28.0 | 1.75 | 2.3 | 2 | 22 | 128 |

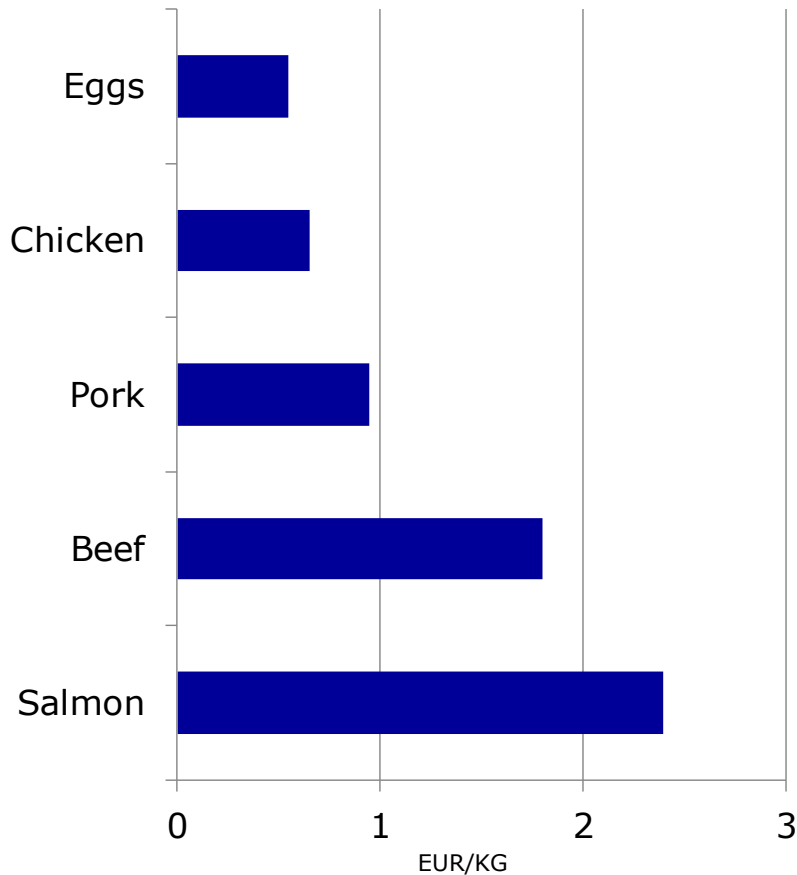


• Source: Rabobank analysis based on LEI data

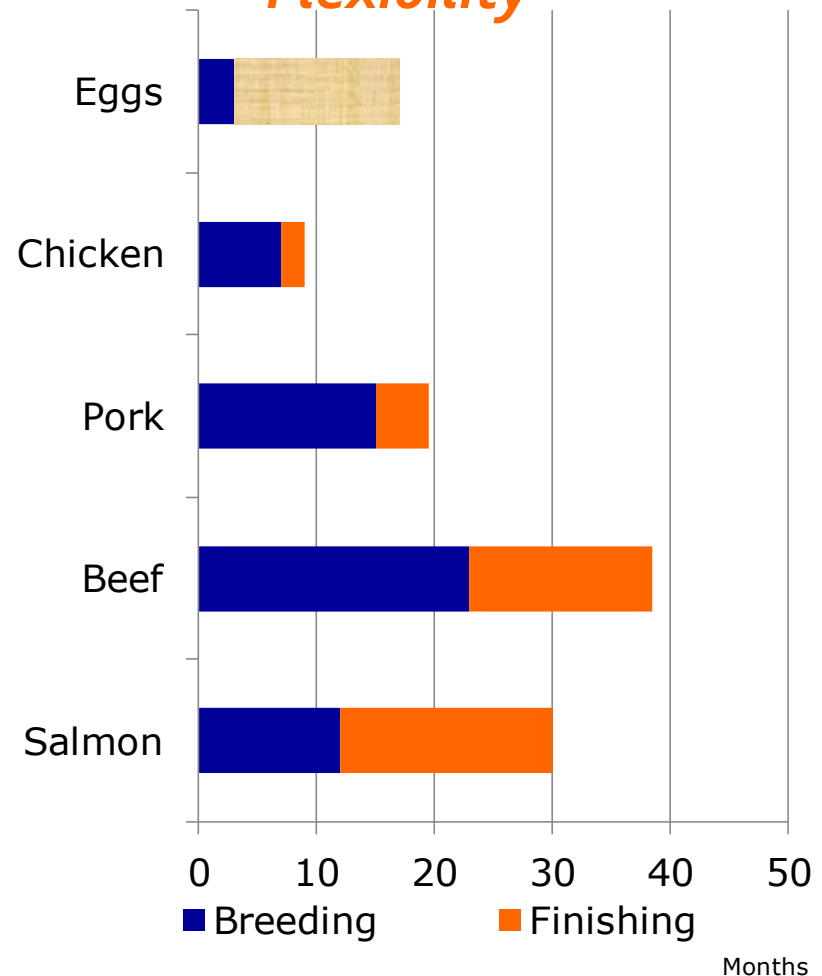
Chicken and eggs perfectly positioned as cheapest and most flexible proteins



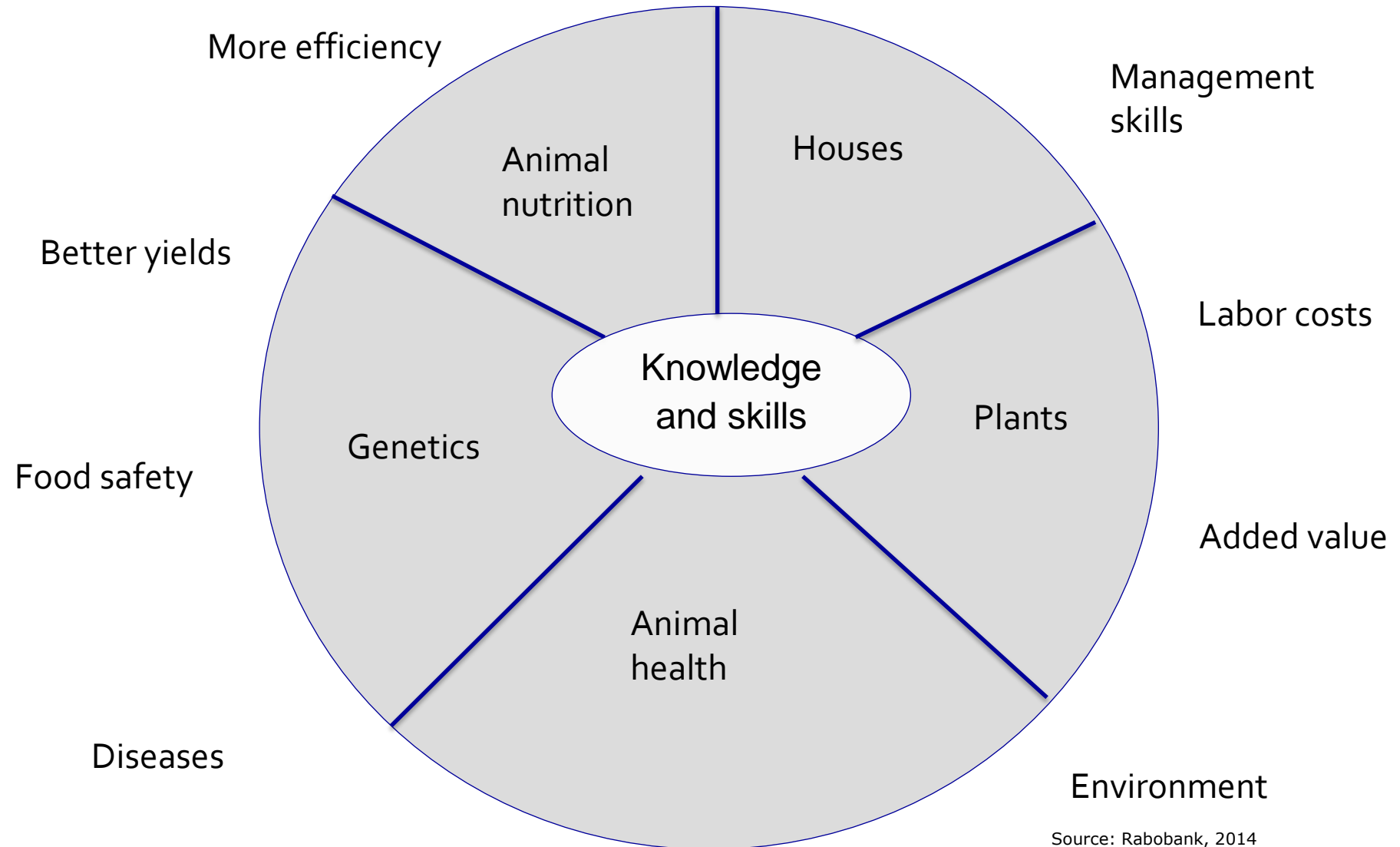
Cost of production "Efficiency"



Production cycle length "Flexibility"



Meeting future supply: A multi disciplinary challenge



Ongoing high and volatile feed costs. Efficiency and yield as KSFs



Source: Rabobank, 2014



Thanks for your attention

Questions?

nan-dirk.mulder@rabobank.com

Nan-Dirk Mulder, 12 November 2014



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