livestock in a global perspective

Lars Ole Madsen

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Temaer

- Commodity market - the new life after 2007
- The animal - Global and European

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Commodities market

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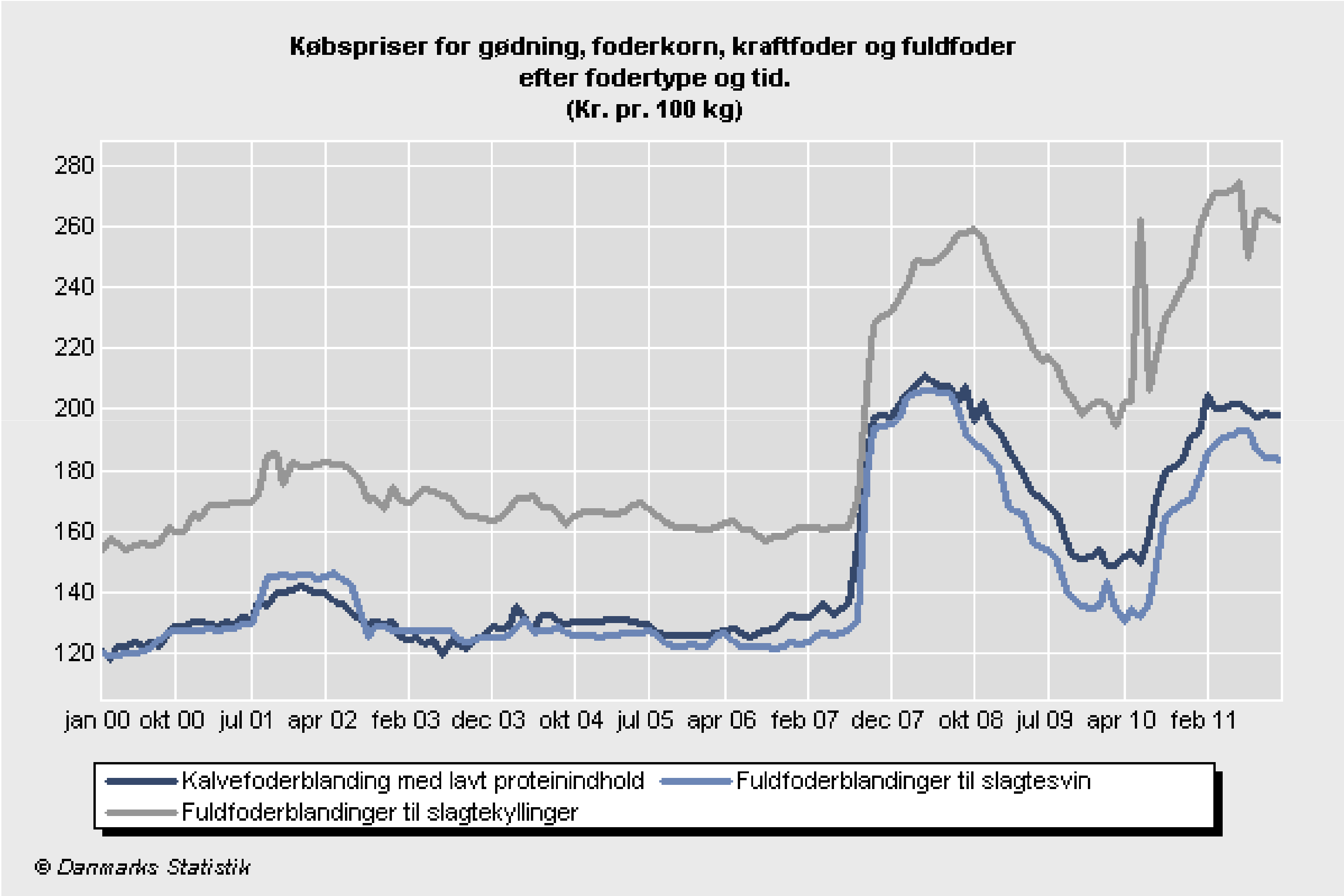
Increasing of volatility in commodity markets

Before 2008

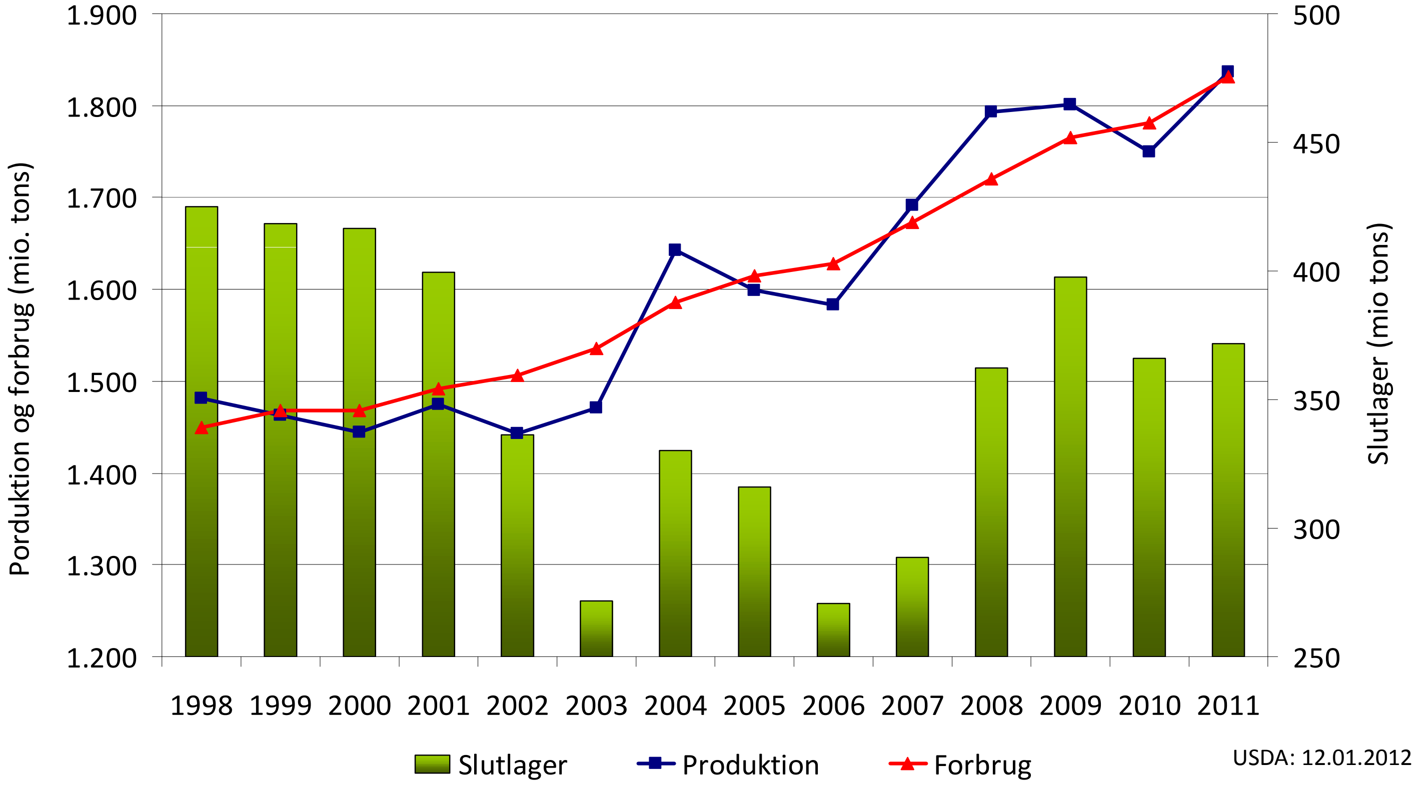
After 2008



Købspriser for gødning, foderkorn, kraftfoder og fuldfoder
efter fodertype og tid.
(Kr. pr. 100 kg)
280
260
240
220
200
180
160
140
120
jan 00 okt 00 jul 01 apr 02 feb 03 dec 03 okt 04 jul 05 apr 06 feb 07 dec 07 okt 08 jul 09 apr 10 feb 11
Kalvefoderblanding med lavt proteinindhold
Fuldfoderblandinger til slagtesvin
Fuldfoderblandinger til slagtekyllinger
© Danmarks Statistik

Global grain production, consumption and stocks

(mio tons)	2009	2010	2011
Produktion	1.801	1.749	1.837
Forbrug	1.765	1.781	1.831
Lager	398	366	372



USDA: 12.01.2012

Expectation in livestock production

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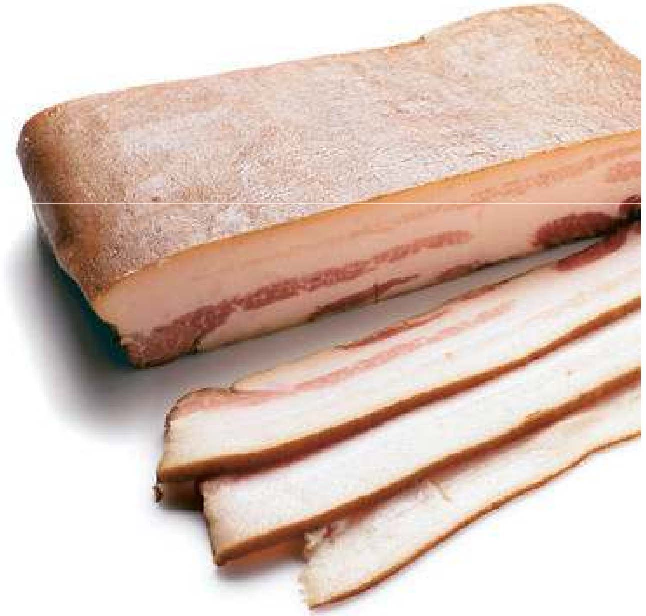
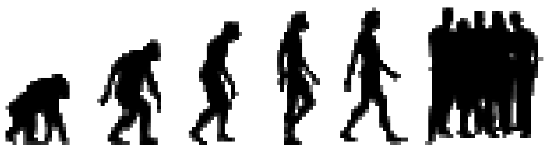
Demands

- 7 billion and increasing

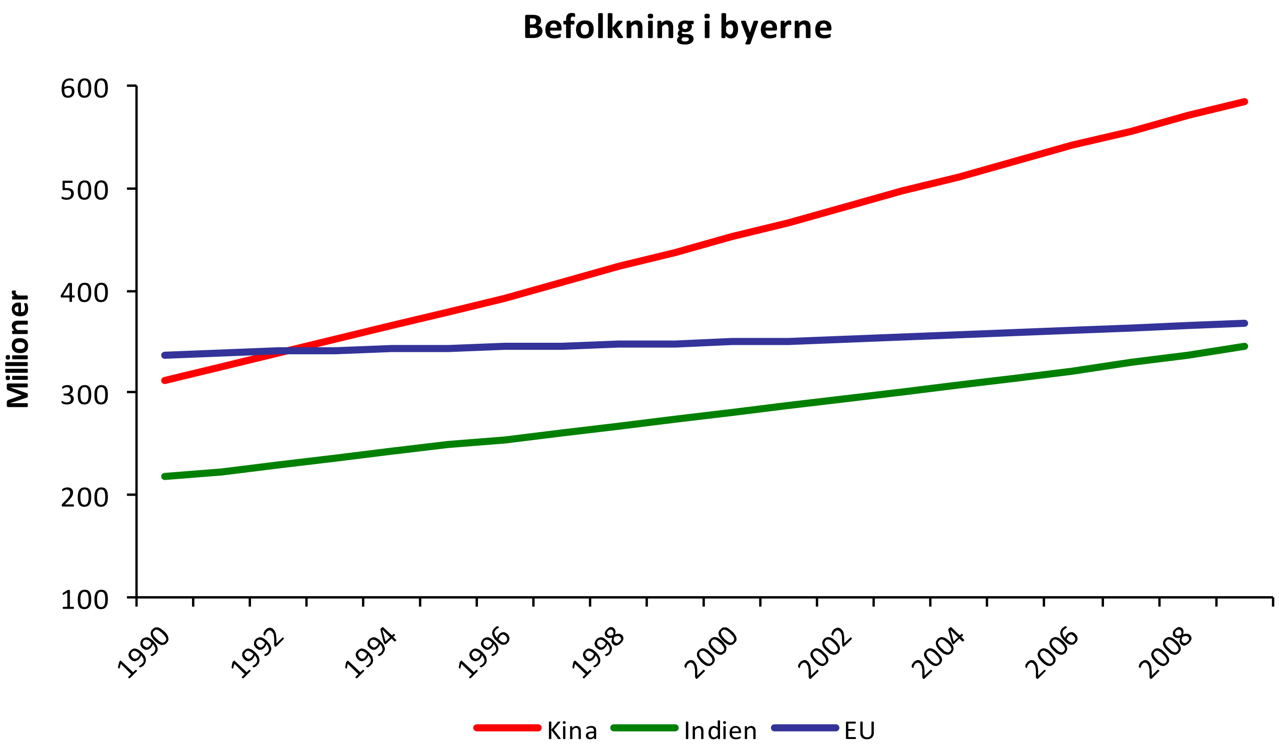
✓ Growth in world population
✓ Growth in the economies of Asia
✓ Growing need for crops and meat
✓ Bioenergy





Increasing of the urbanization in China and India!

A development that looks to continue



Kina + 275 mio.

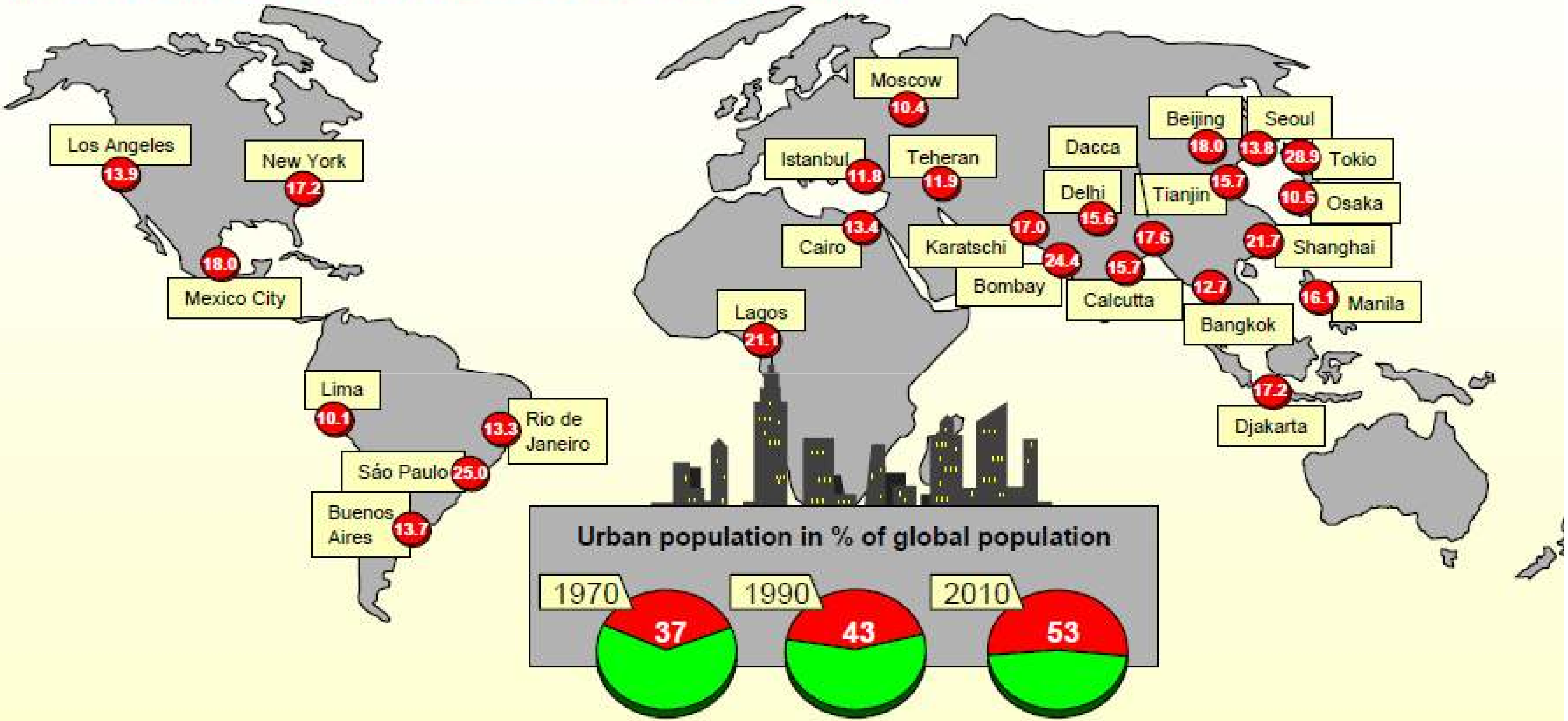
Indien + 125 mio.

World Bank, 2010

The Largest Cities of the World

"Megacities" with more than 10 Million people

Assessed number of people in the year 2010 (in Mio.)



Source: UN, Andersen, U., 199

PROJECTED TOTAL CONSUMPTION OF MEAT AND DAIRY PRODUCTS

	2010	2020	2030	2050	2050/2010
	(million tonnes)				
WORLD					
All meat	268.7	319.3	380.8	463.8	173%
Bovine meat	67.3	77.3	88.9	106.3	158%
Ovine meat	13.2	15.7	18.5	23.5	178%
Pig meat	102.3	115.3	129.9	140.7	137%
Poultry meat	85.9	111.0	143.5	193.3	225%
Dairy not butter	657.3	755.4	868.1	1 038.4	158%
DEVELOPING COUNTRIES					
All meat	158.3	200.8	256.1	330.4	209%
Bovine meat	35.1	43.6	54.2	70.2	200%
Ovine meat	10.1	12.5	15.6	20.6	204%
Pig meat	62.8	74.3	88.0	99.2	158%
Poultry meat	50.4	70.4	98.3	140.4	279%
Dairy not butter	296.2	379.2	485.3	640.9	216%

Source: FAO, 2006c. Some calculations by authors.
Note these figures are based on World Population Prospects: The 2002 Revision.

PERCENT OF TOTAL CONSUMPTION IN DEVELOPING COUNTRIES

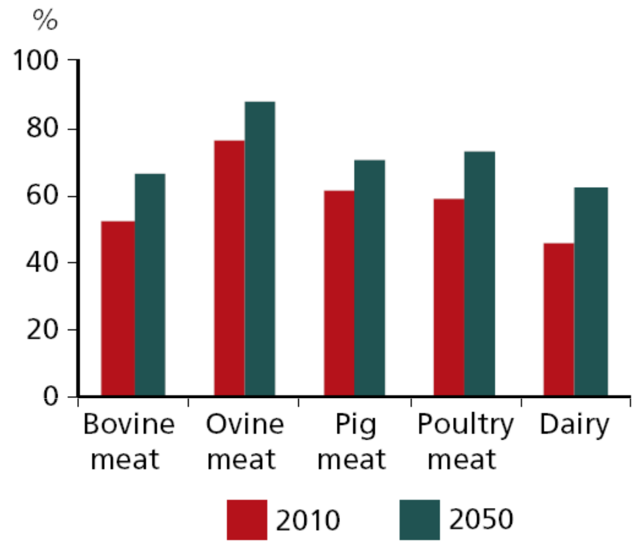
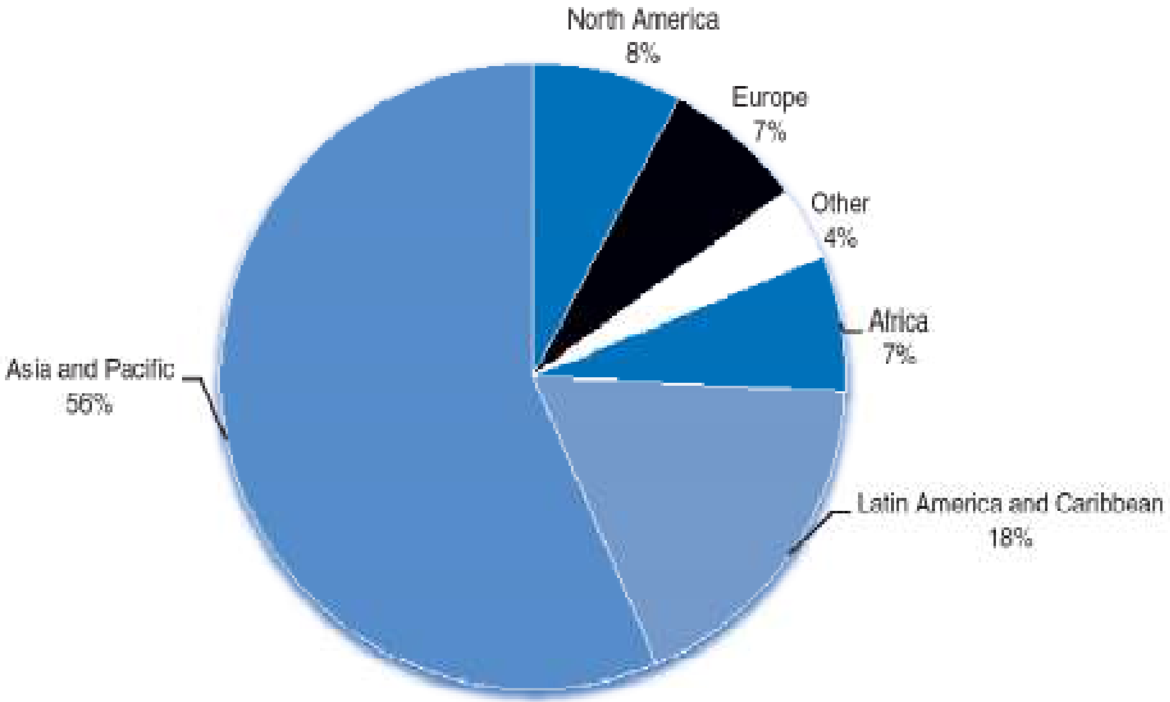


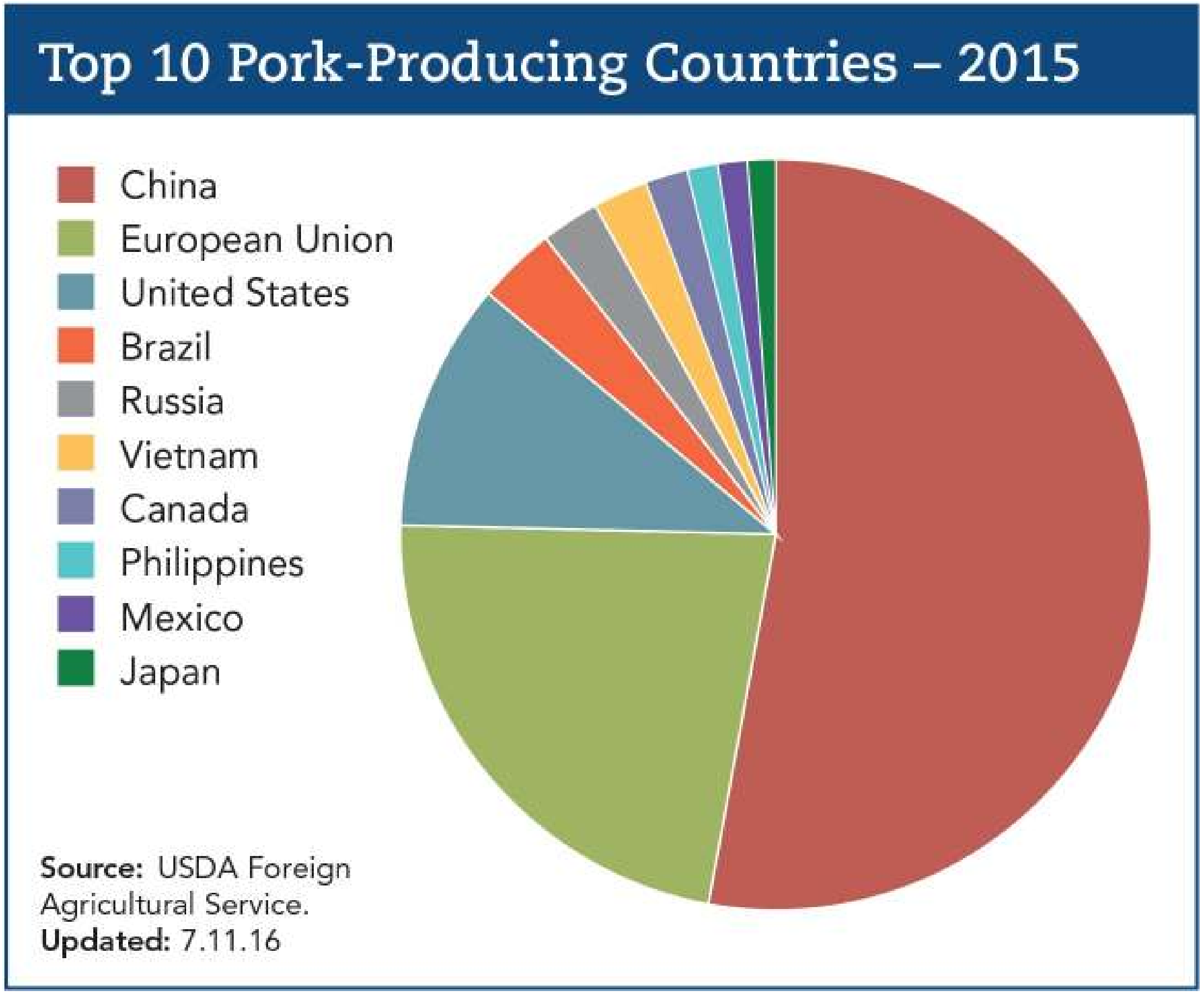
Figure 7.3. **Increase in meat demand, by region between 2020 and the base period (c.w.e. or r.t.c.)**

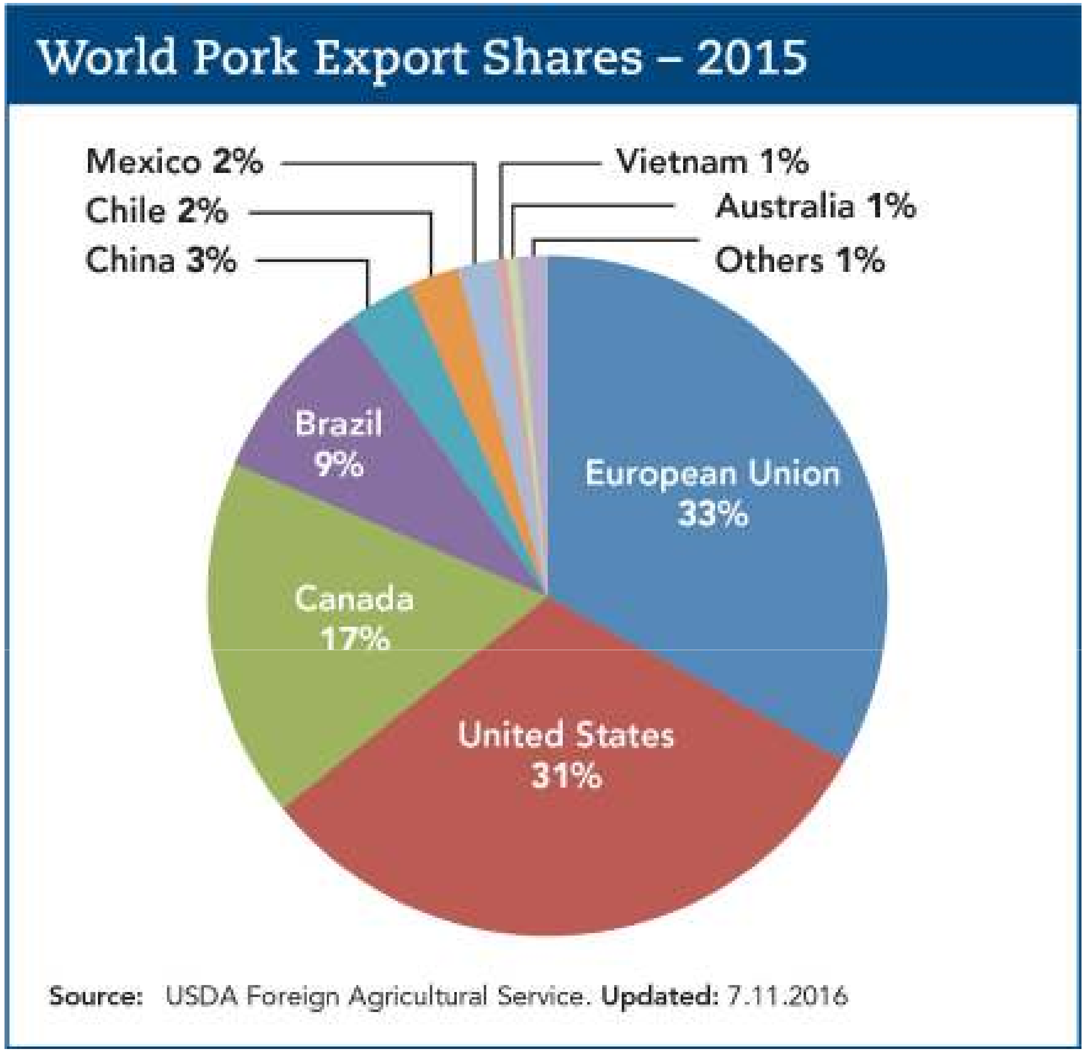
Consumption growth of 60 Mt is projected by 2020; predominantly in Asia



Source: OECD and FAO Secretariats.

StatLink http://dx.doi.org/10.1787/888932427094


Top 10 Pork-Producing Countries – 2015
China
European Union
United States
Brazil
Russia
Vietnam
Canada
Philippines
Mexico
Japan
Source: USDA Foreign Agricultural Service.
Updated: 7.11.16



For EU it is 2.1 Mio. ton.

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ROPPA consulting

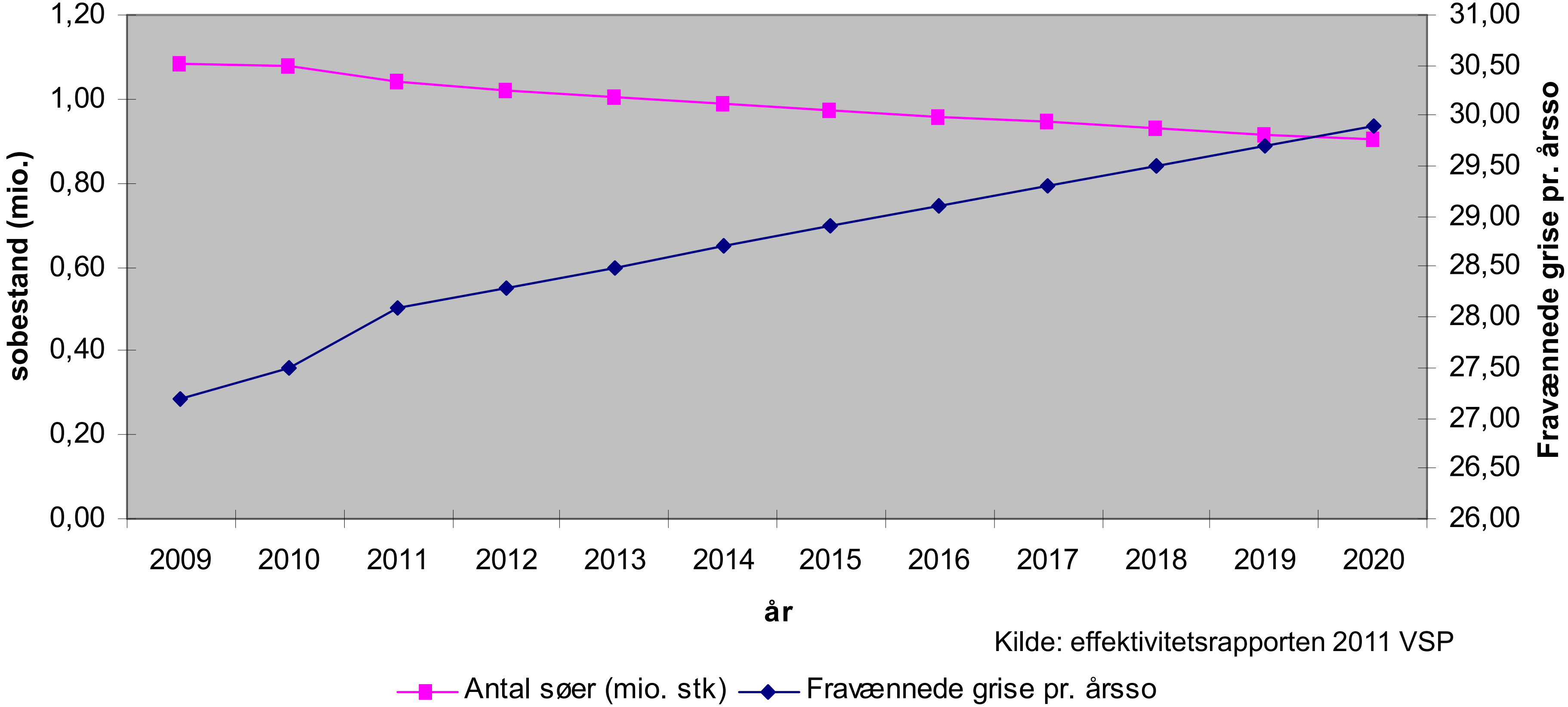
ACTIONS ... Who will Export?

Main meat exporters, 2020 (million MT)

	Beef	Pork	Poultry	Total
1 - Brazil	2,325	0,761	5,171	8,257
2 - USA	1,444	2,577	3,702	7,723
3 - Canada	0,912	1,399	0,196	2,507
4 - EU-27	0,138	1,459	0,898	2,495
World	10,457	7,568	12,526	30,551

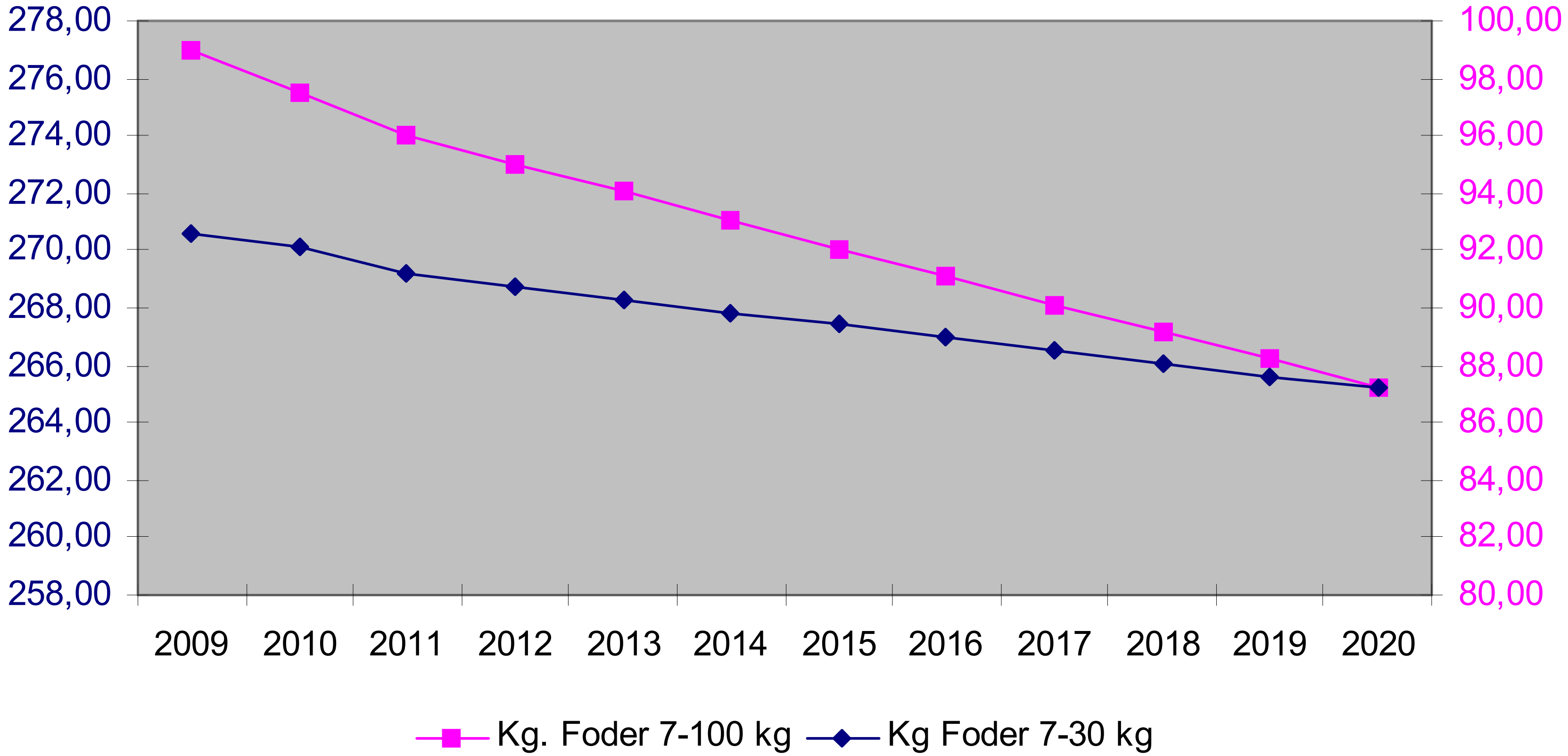
Source: L. Roppa, 2012 - Based: 'OCDE-FAO Agricultural Outlook 2011-2020', July 2011

Productivity is improved and the sow population is reduced in Denmark



Productivity growth means that production will decline only half of what it would have done if there had been an increase in productivity.

Feed consumption decreases in both pigs and piglets



DLG, prognose 2011

Summary of future livestock

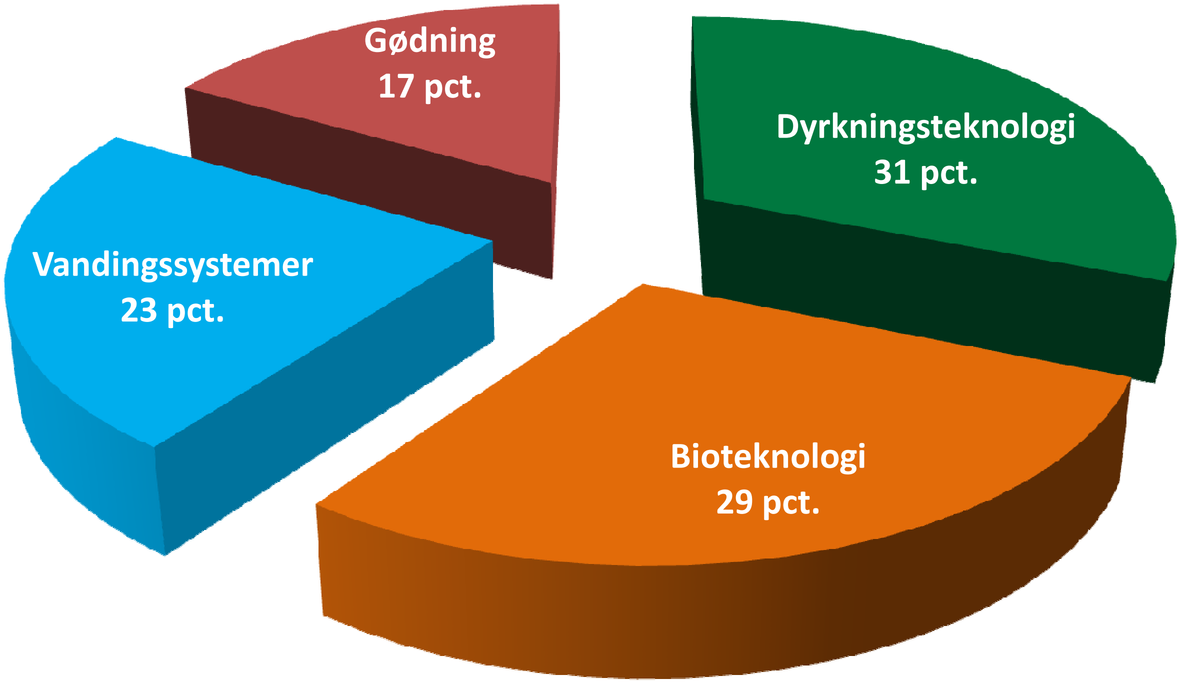
- Growth in consumption and production in the EU is expected to be limited.
- Increasing in production and demand will take place in Latin America and Asia.
- Can production keep up with these countries?:
  - Invironment
  - veterinary Affairs
  - Pure water
  - Access to raw materials
  - public acceptance

- Optimism for European livestock production
  - High productivity
  - High food quality and safety
  - Rising prosperity in European countries

The demand internationally

- Overall demand growth of grain 2½ - 3½ per cent. per year.
  - Of food (direct + feed): 1½ - 2 pct. per year.
  - Bioenergy: 1- 1½ pct. p.a.
- (Traditional plant breeding contributes around 1.3 per cent.)

Where will the productivity effectiveness comes from?



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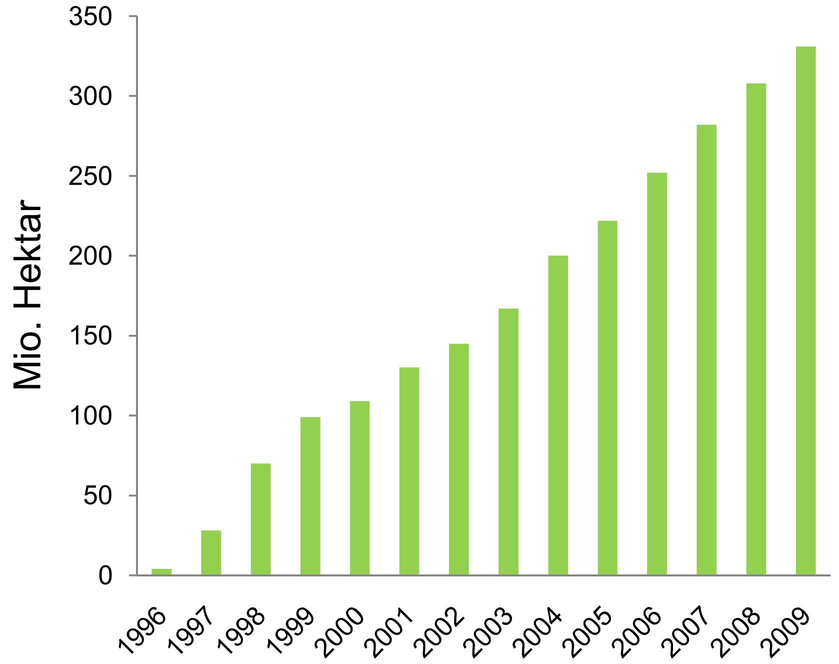
Modern technology (GMO technology)? –

We can not stop global development, but we can with restraint destroy our competitiveness.

77 per cent. of the world's soybean production is based on varieties whose development has been used GM technology.

Cotton 49 per cent., Corn 26 percent. and rape 21 percent.

Asia, North America, South America, Africa has fully implemented the technology.



Kilde: ISAAA, 2009
(International Service for the Acquisition of Agri-Biotech Applications)

Technology meets the climate challenge and brings "sustainability"

- Now it costs 30 per cent. less "energy" to produce a ton of corn than just 10 years ago due to GMO.

- Next generation is developt:
- 30 pct. less water
- 20 pct. less nitrogen
- 20 pct. Higher yields

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technology Exploitation

- Not only, but also GMO although it is difficult politically in Europe

Sophisticated technology debate - GMO argument has been too simplistic (pesticides).

- They overlooked elements of modern technology (GMO) may provide less consumption of:
  - water resources
  - fertilizer
  - Chemistry

- Higher yields
- Pre-saved quality properties

Threats, challenges and opportunities

- Globalisation
- Consumers demands
- environmental requirements
- National and international policy restrictions
- Headlines from Newspaper
- competitors' efficiency