AGRICULTURE AND FERTILIZERS ANALYSIS, LESSONS, SOLUTIONS

1. GLOBAL TRENDS

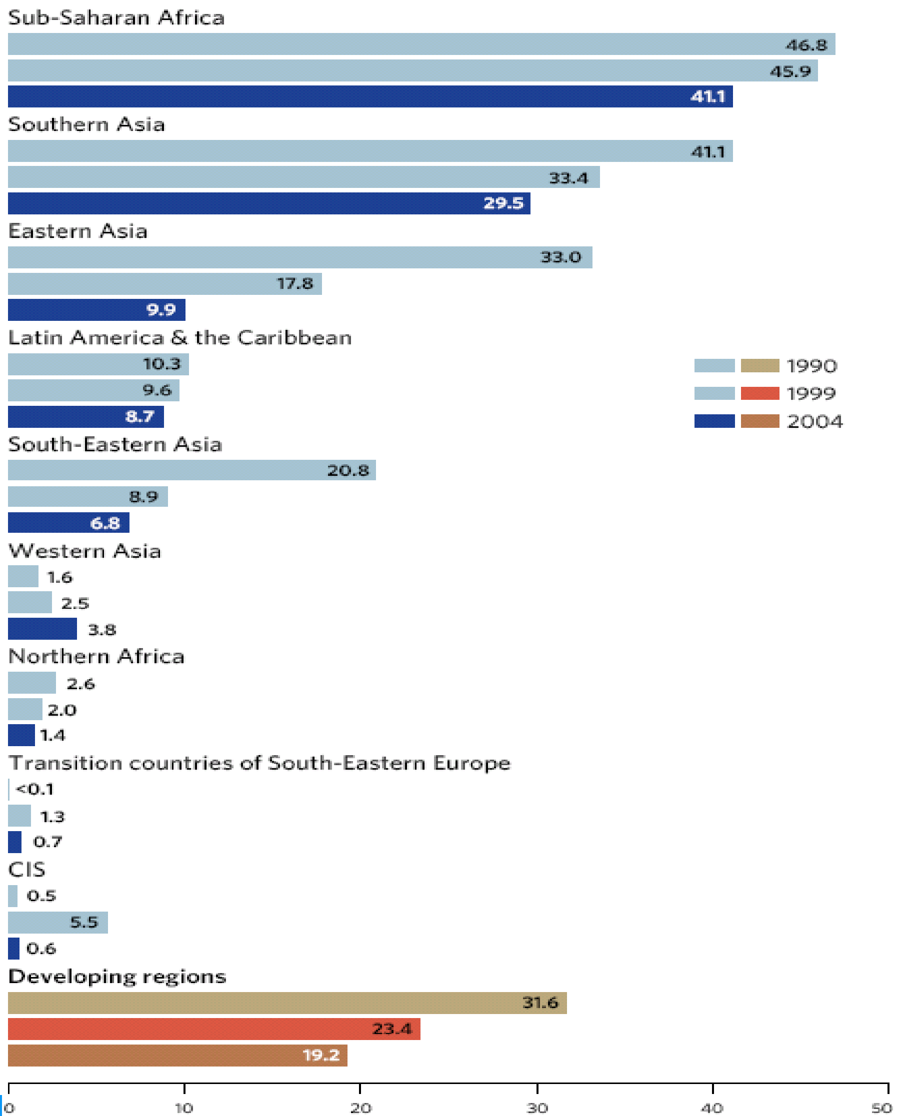
FERTILIZERS‘ DEMAND DRIVERS

- Global population increase >1-2% p.a.
- Bio-fuel production in USA, Latin Americas and Europe
- Steep income growth in some developing countries
- Change of diet in Asian countries
- High energy prices
- Natural resources constraints (water, land)
- Tight food supply
- High prices for agricultural commodities

2. INCOME AND NUTRITION

BETTER NUTRITION BECAUSE OF ESCAPE OF 300 M PEOPLE FROM POVERTY

Proportion of people living on less than $1 a day, 1990, 1999 and 2004
(Percentage)

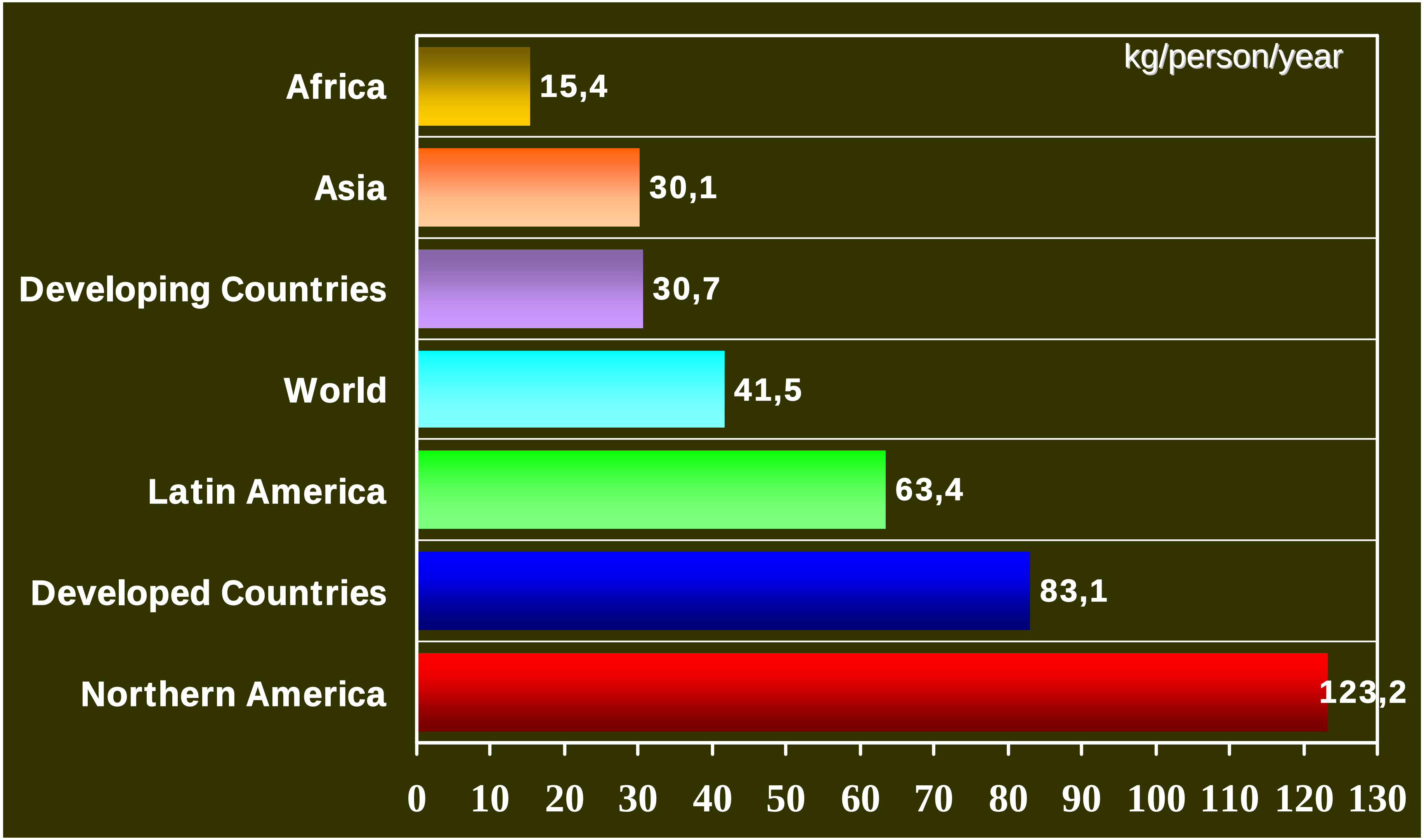


The amount of people who earn less than 1 $ per day, decreased from 32% to 19% between 1990 und 2004. Economic development in Asia caused this phenomenon. About 300 M people there escaped from the extreme poverty.
The most immediate effect of additional income became a nutrition improvement.

Due to UN forecast this trend will continue.

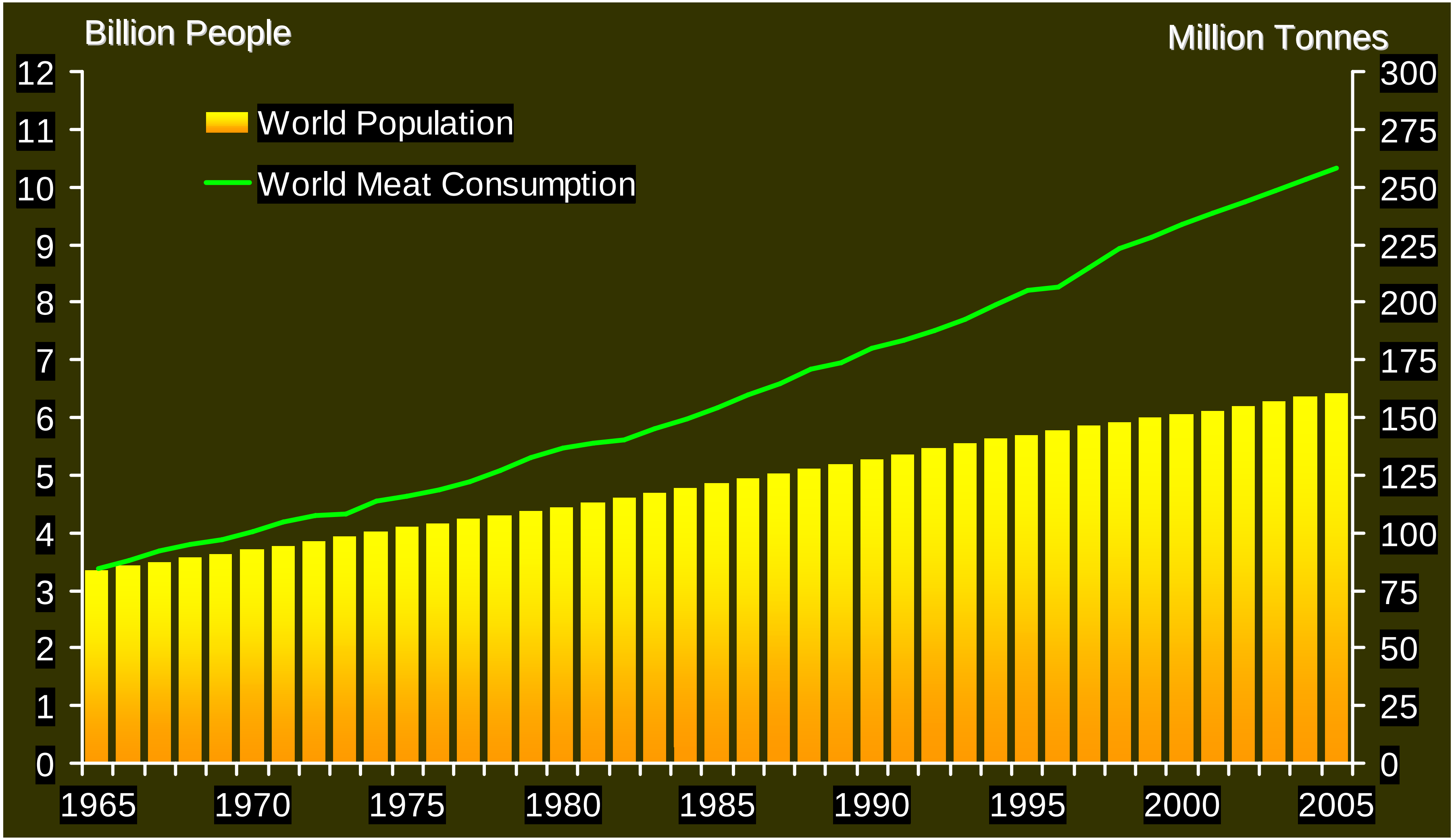
Source: UNO Millennium Development Goals Report 2007

MEAT CONSUMPTION IN DEVELOPING COUNTRIES STILL WELL BEHIND



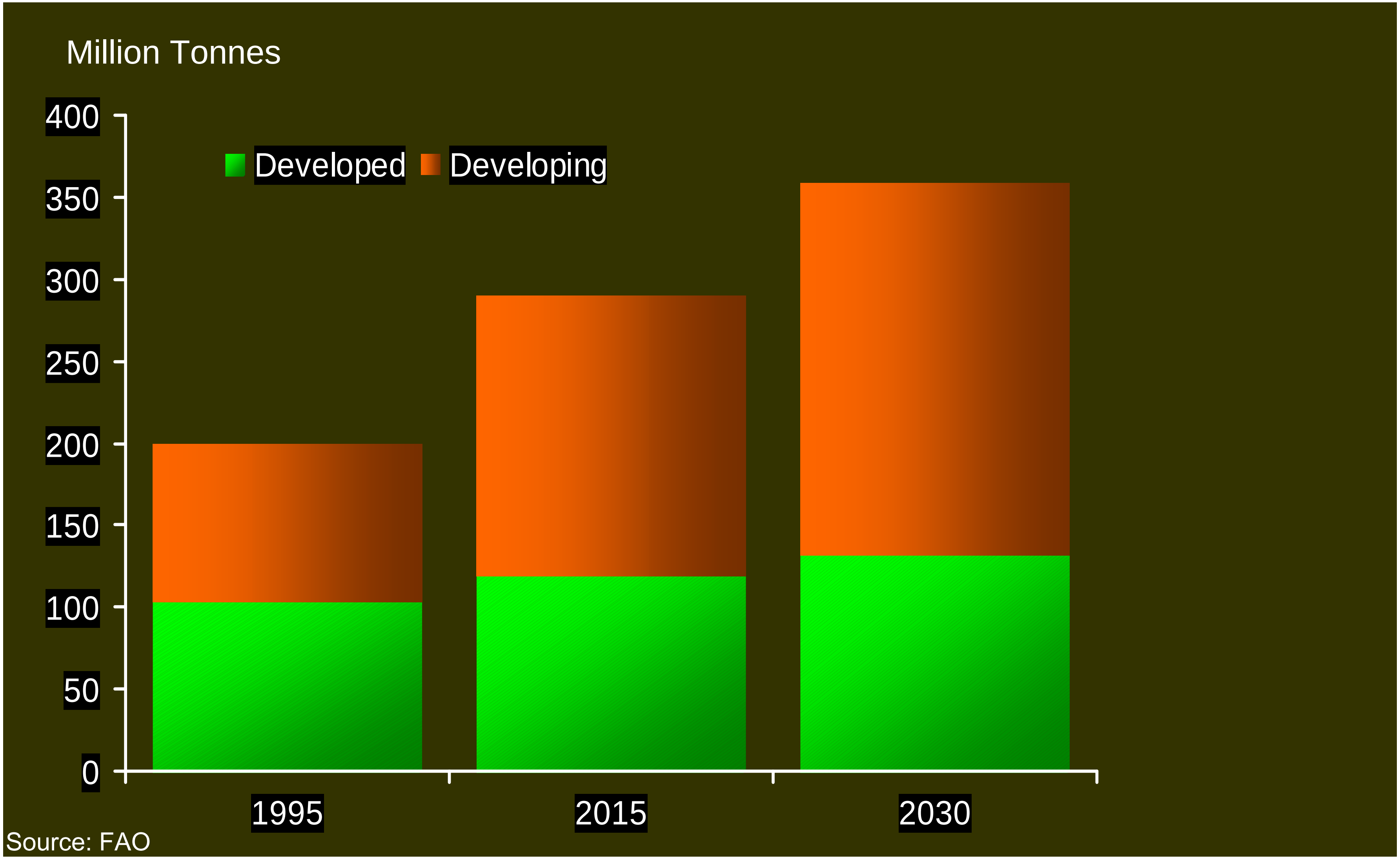
Source: FAO

MEAT CONSUMPTION GROWS MUCH FASTER THAN POPULATION

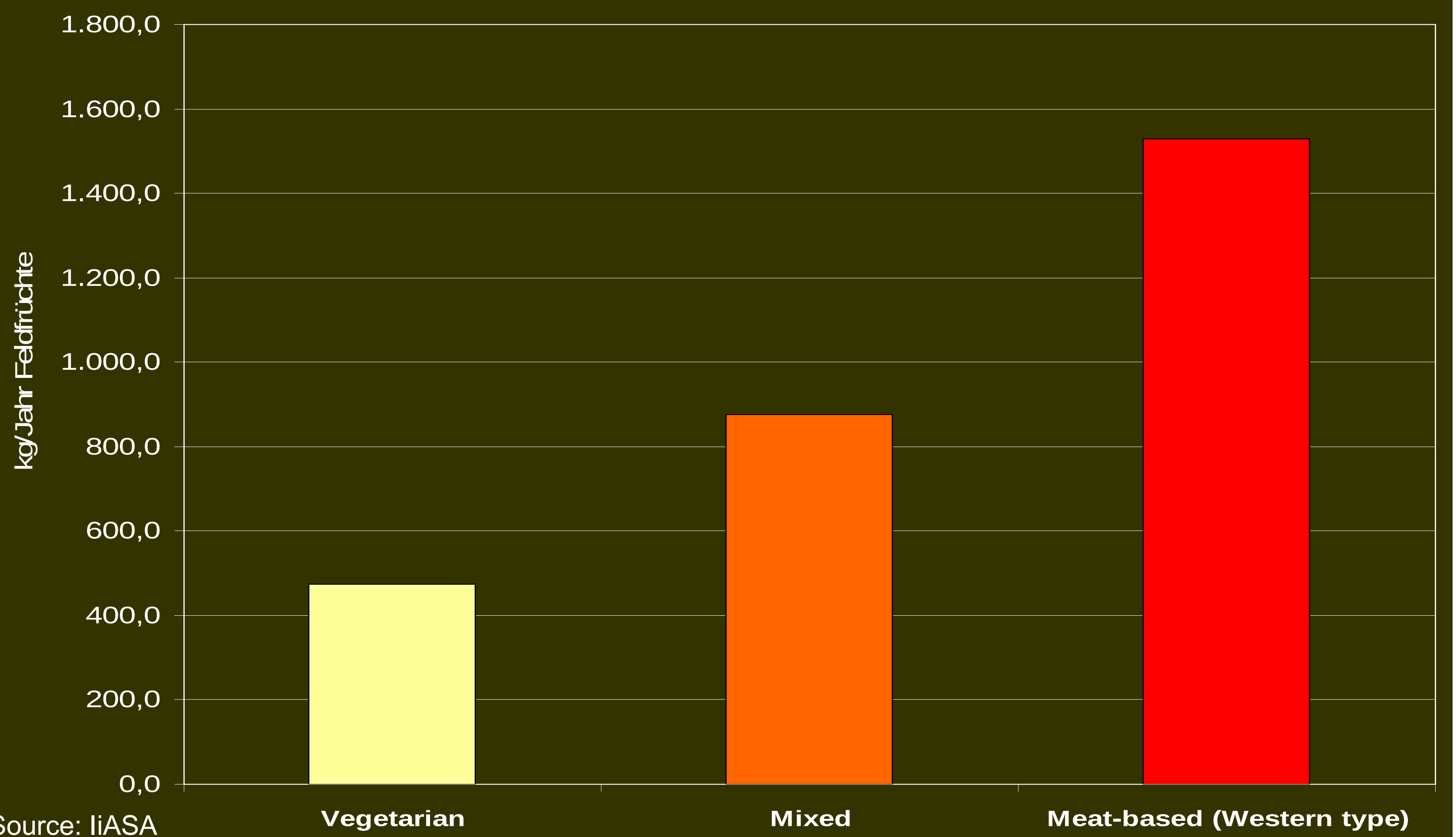


Source: FAO

GLOBAL MEAT CONSUMPTION WILL ALMOST DOUBLE BY THE YEAR 2030



PROTEIN-RICH DIET NEEDS TRIPLE PRODUCTION OF CORN AND SOYA



Source: IiASA

3. BIO- FUELS

DRIVERS FOR BIO-FUEL PRODUCTION

The global utilization of bio-fuels is subject to the following criteria:

- Ecological benefits
- Reduction of CO_2 emissions
- Economic benefits (without subsidizing)

Ecological benefits and reduction of CO_2 emissions:

Results of the Brazilian program „Proalcool“ from 1975 to 2005:

- Reduction of CO_2 emissions: 644 Mill. t
- Saving of fossil fuels: 778 MBOE (Million Barrels Oil Equivalents)
- Saving of foreign currency: USD 72 billions

Source: JSA Ltda, Phosphates 2008 Conference

ENERGY & COST BALANCE FOR BIOFUELS

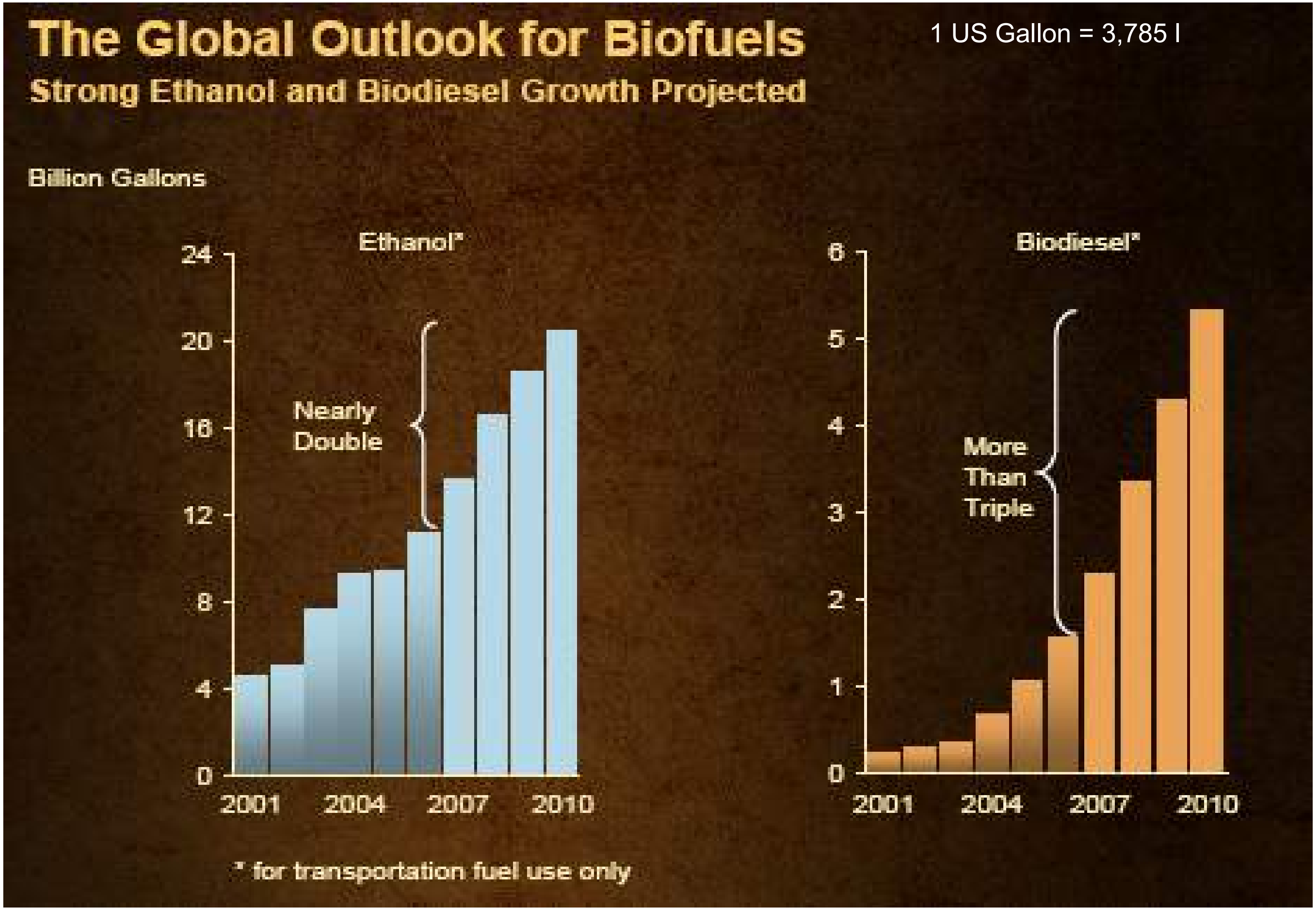
Economic results of the production of ethanol:

	MJ per ton	USD/Barrel
• Wheat (EU)	1,3	154,0
• Corn (USA)	1,5	75,0
• Beetroots (EU)	1,9	
• Sugar Cane (Brazil)	8,0	32,0
• Sugar Cane (Australia)		51,0
• Sugar Cane (Thailand)		46,0
• Sugar Cane (Brazil 2010)	10,0	?

Conclusion: Production of biofuels is economically viable in many countries outside Europe, provided the crude oil price is above USD 75,-/barrel.

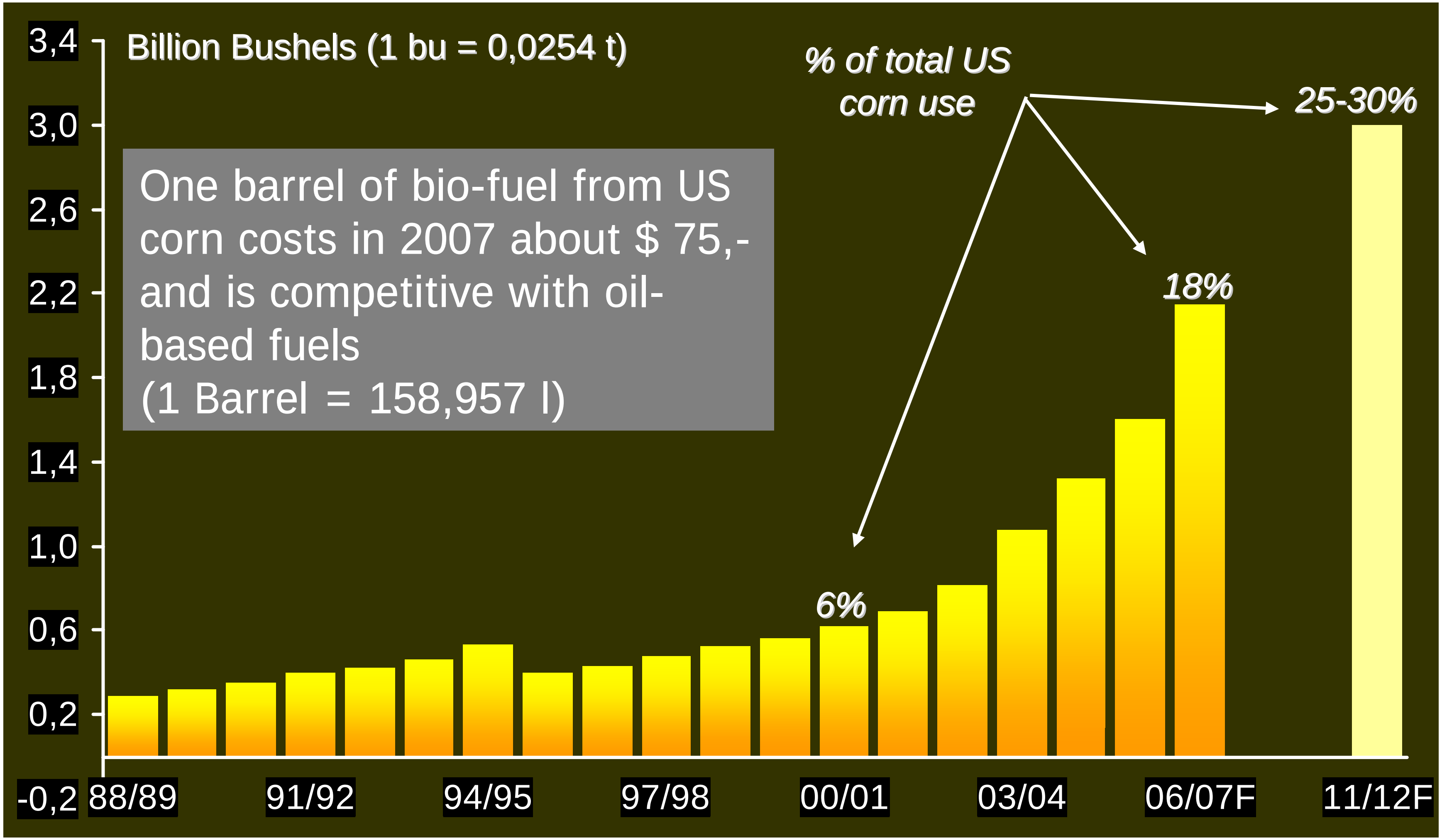
Source: JSA Ltda, Phosphates 2008 Conference

STRONG GLOBAL DEMAND FOR BIO-FUELS



Source: PIRA / Fondsfinans Fertilizer Investor Conference Dec. 2007

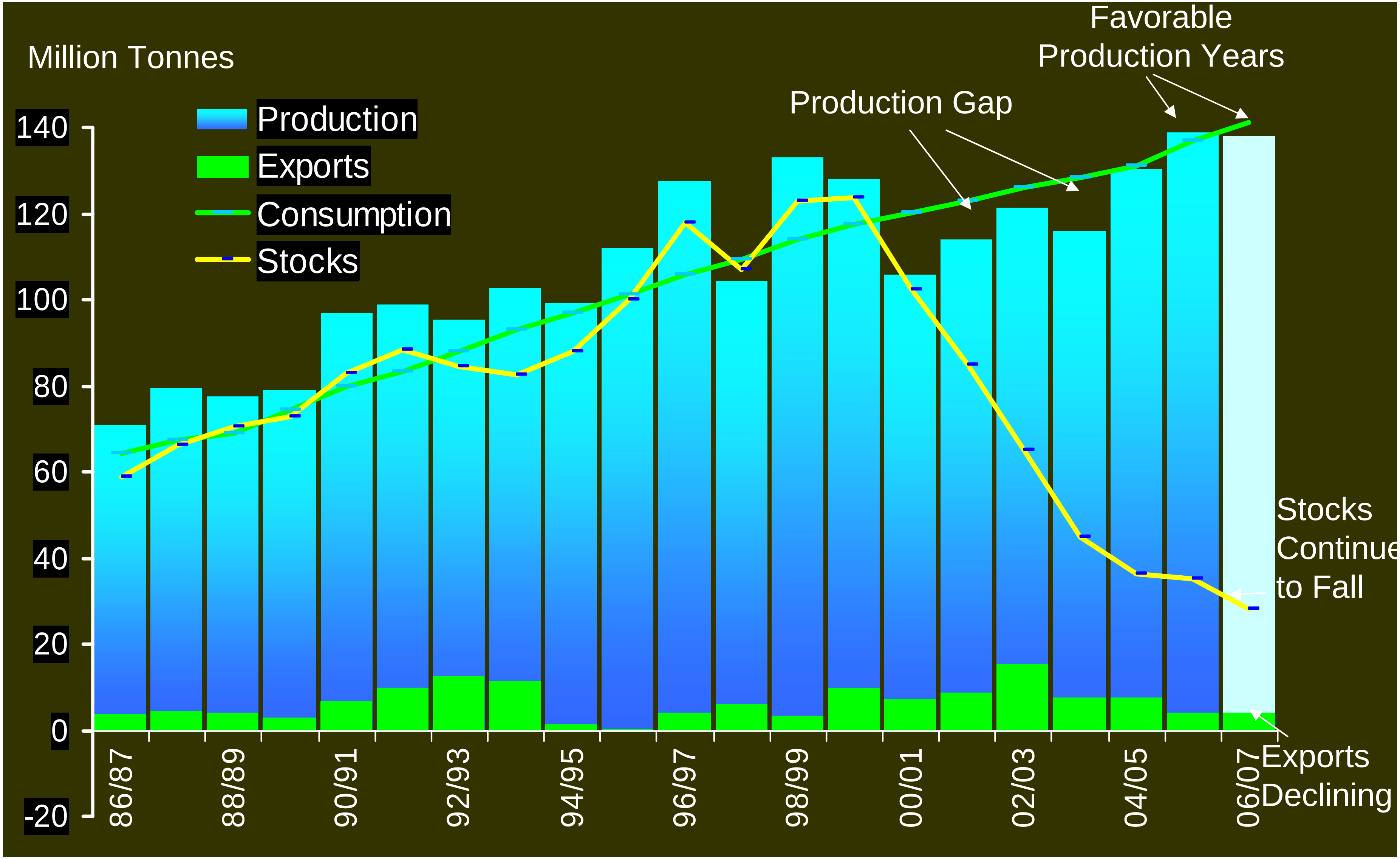
NATIONAL BIOFUEL STRATEGY IN THE US



Source: FAO, USDA

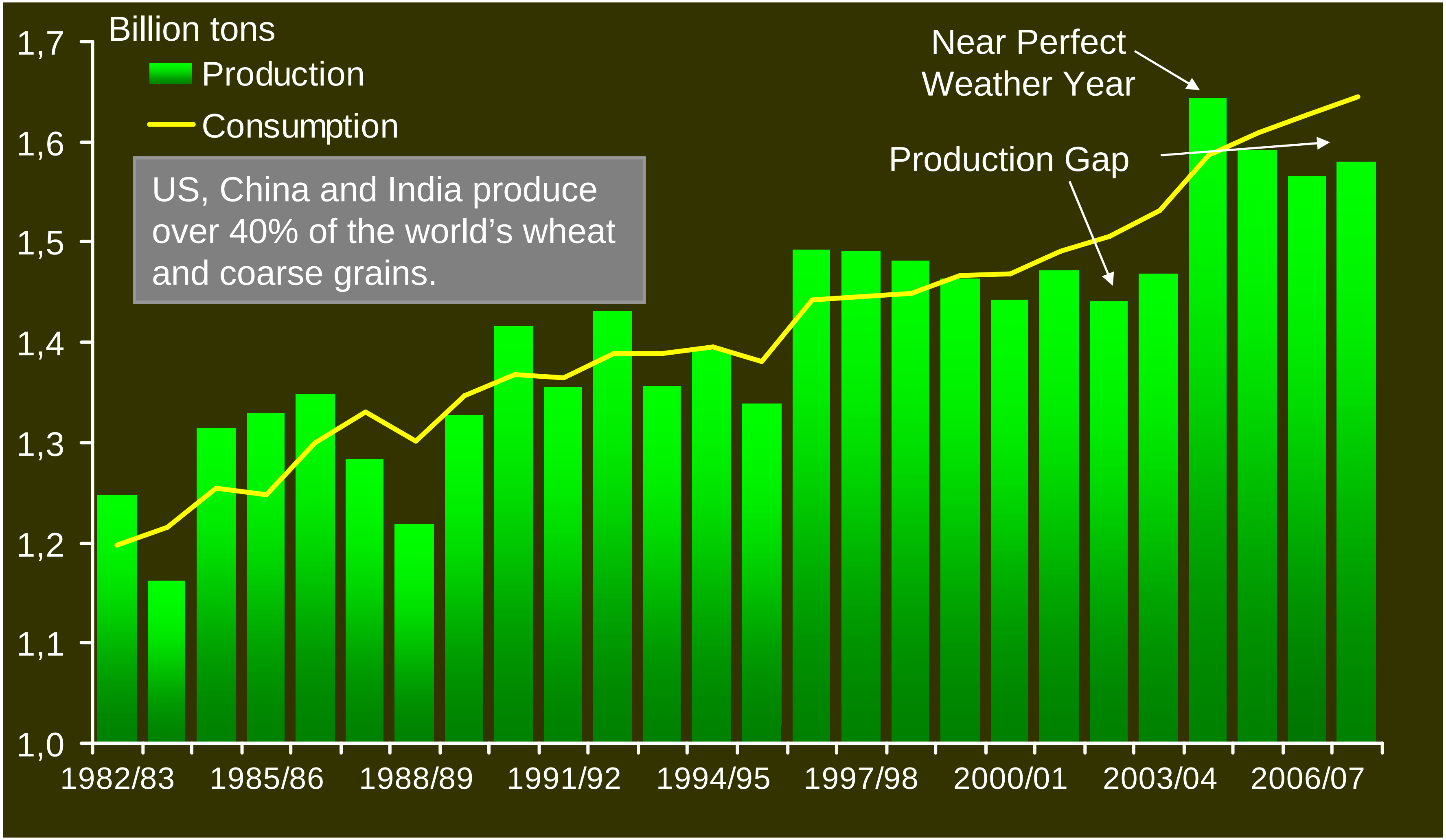
4. AGRICULTURAL PRODUCTS

CHINA BECOMES A CORN IMPORTER - PRODUCTION BELOW DEMAND



Source: FAO

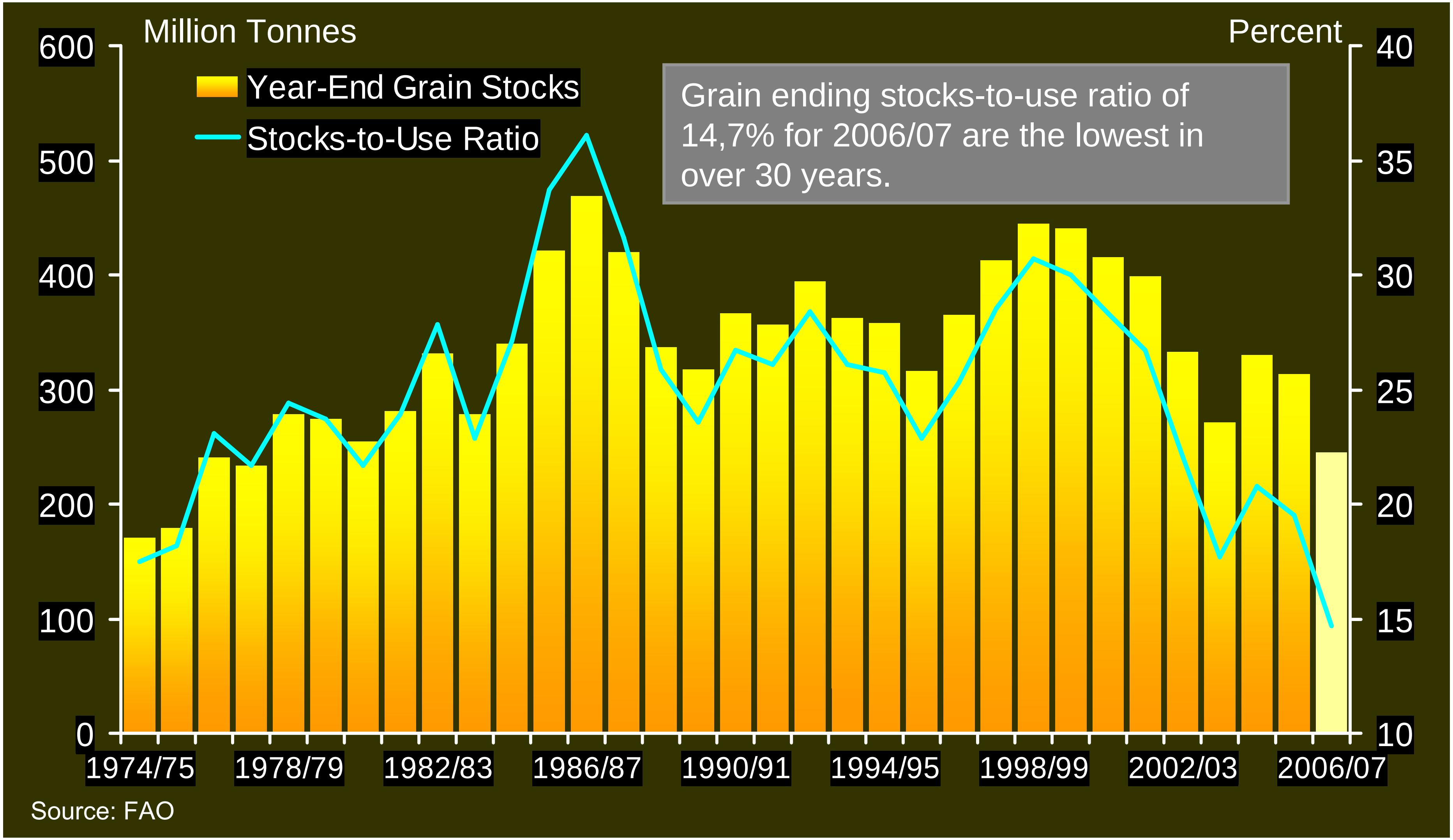
EVEN GOOD HARVESTS IN 2006/2007 DID NOT COVER GLOBAL DEMAND



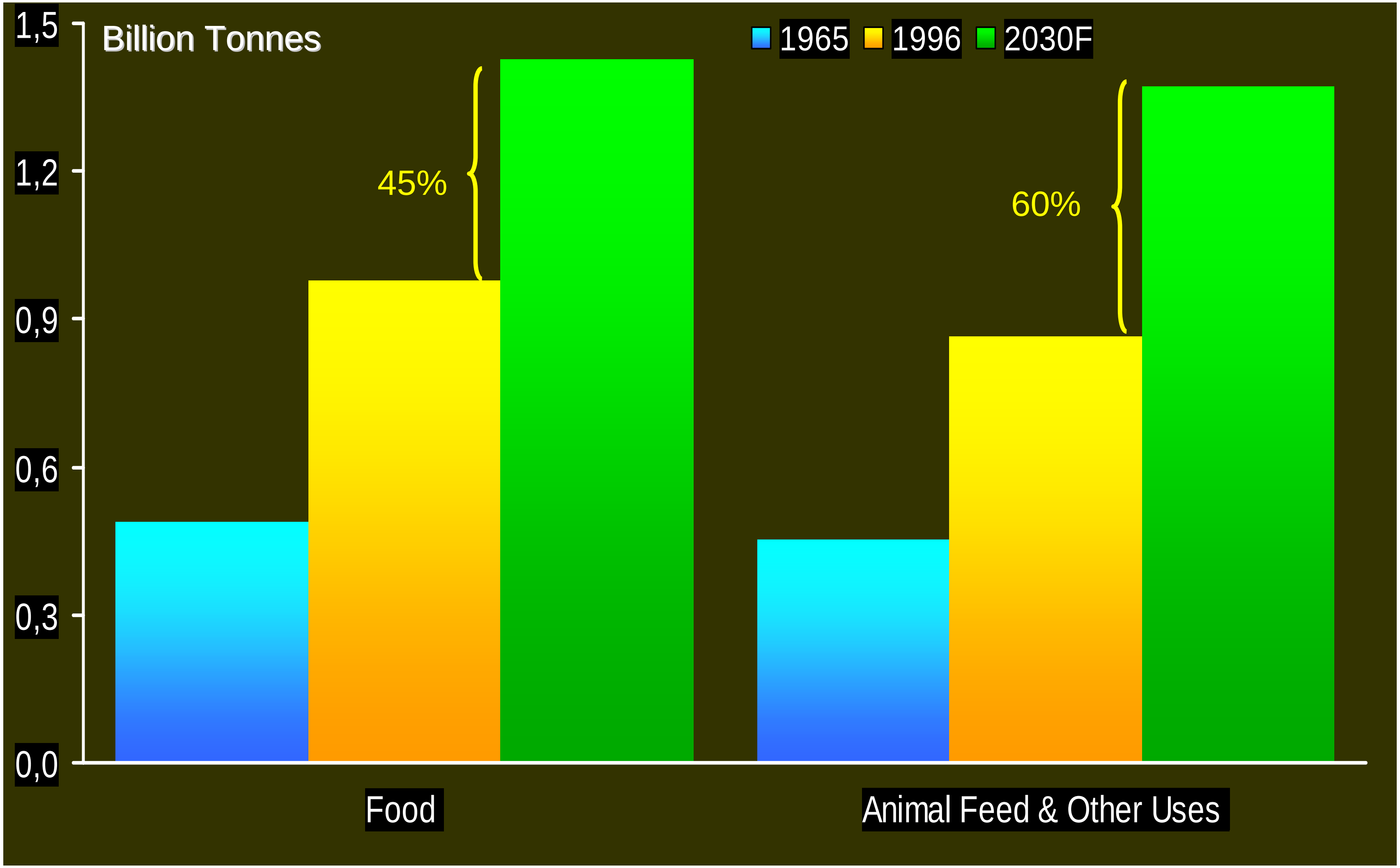
Sources: FAO, USDA

2006/2007 GRAIN STOCKS AT THE LOWEST LEVEL IN 30 YEARS

Wheat & Coarse Grains



IN THE FUTURE GRAIN CONSUMPTION WILL CONTINUE TO GROW



Source: FAO

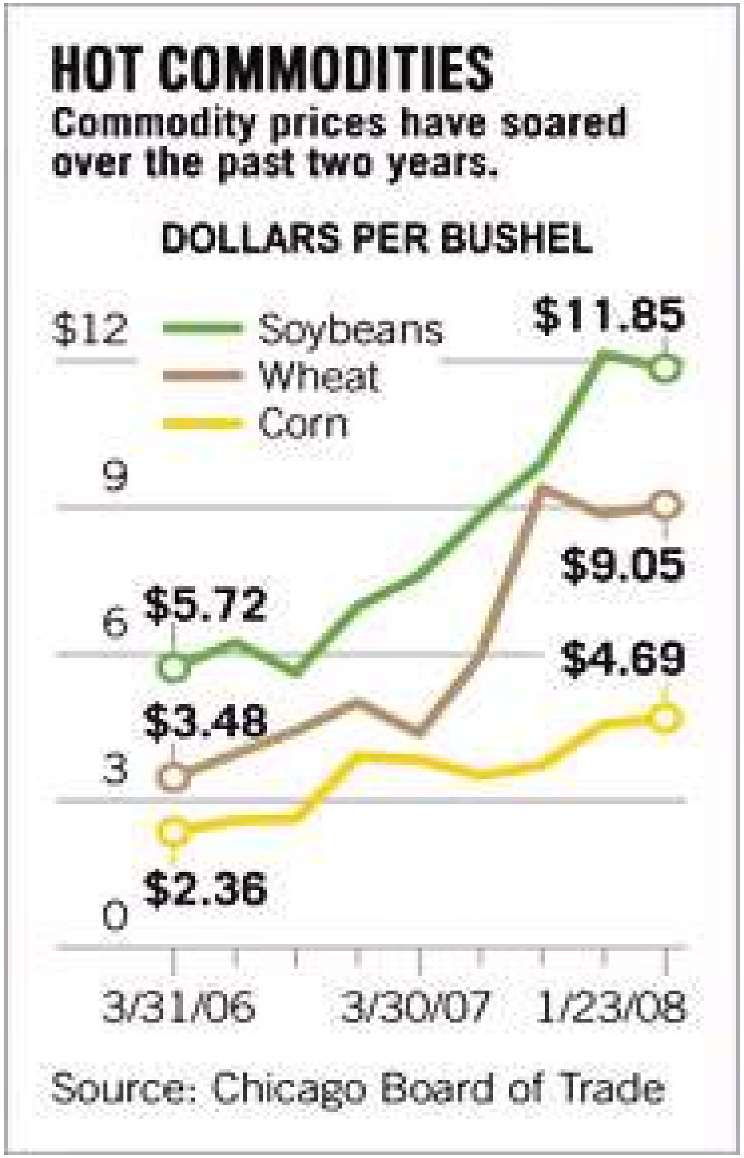
INCREASING CAPITAL FLOWS TO AGRICULTURAL COMMODITIES

A study, conducted by Barclays Capital among 240 institutional investors, has revealed that 100 billion Dollars may be currently invested in agricultural commodities. Until the end of 2008, this investment could increase to 140-175 billion Dollars.

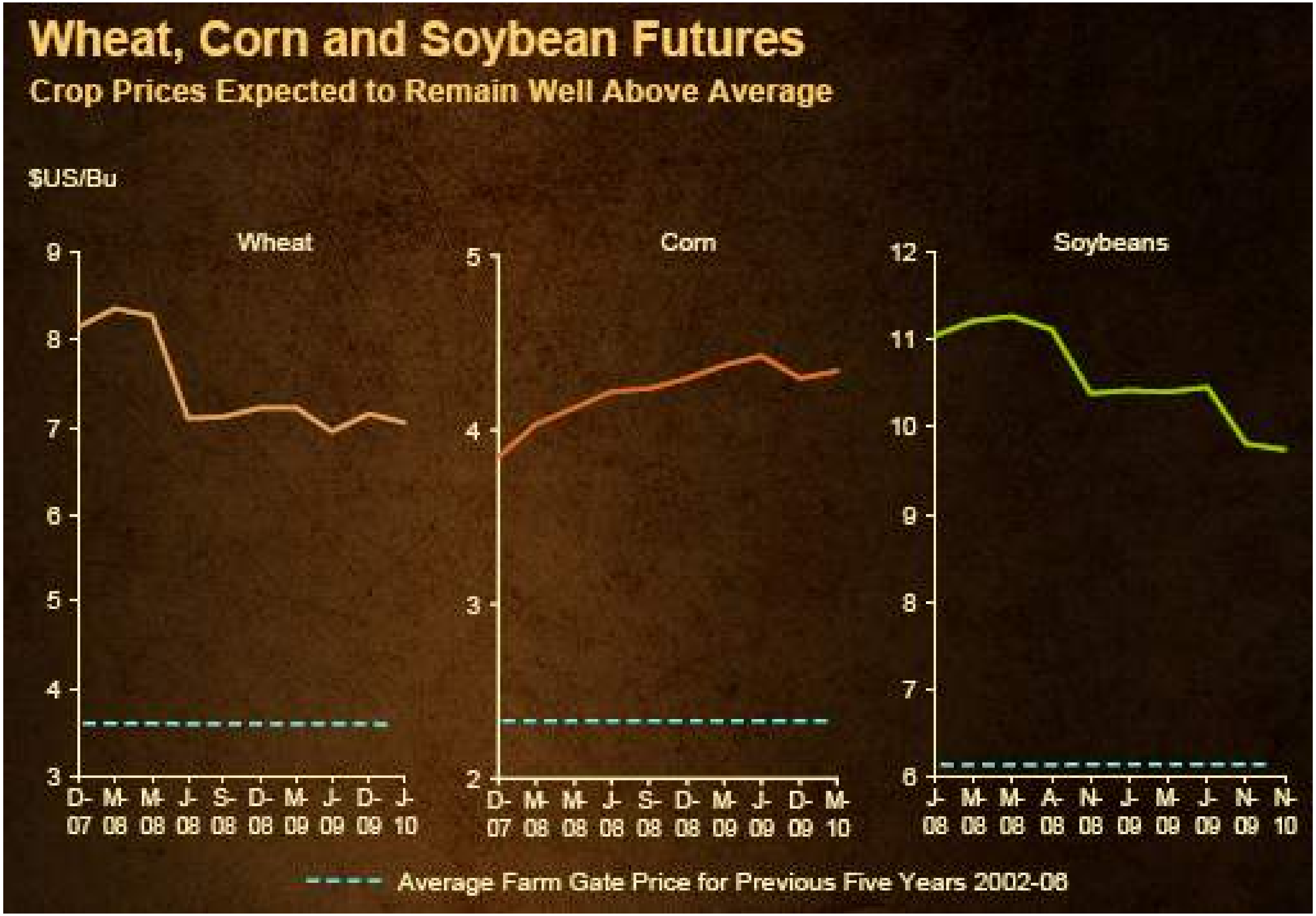
Darin Newsom, a Senior Analyst of DTM means that the market of agricultural commodities has become a market for acknowledged investment strategies.

„The influx of investments has lead to price increases, increased volatility and eroded the cyclical nature of markets for agricultural commodities“, says Newsom.

Source: U.S. News & World Report, 24. February 2008.



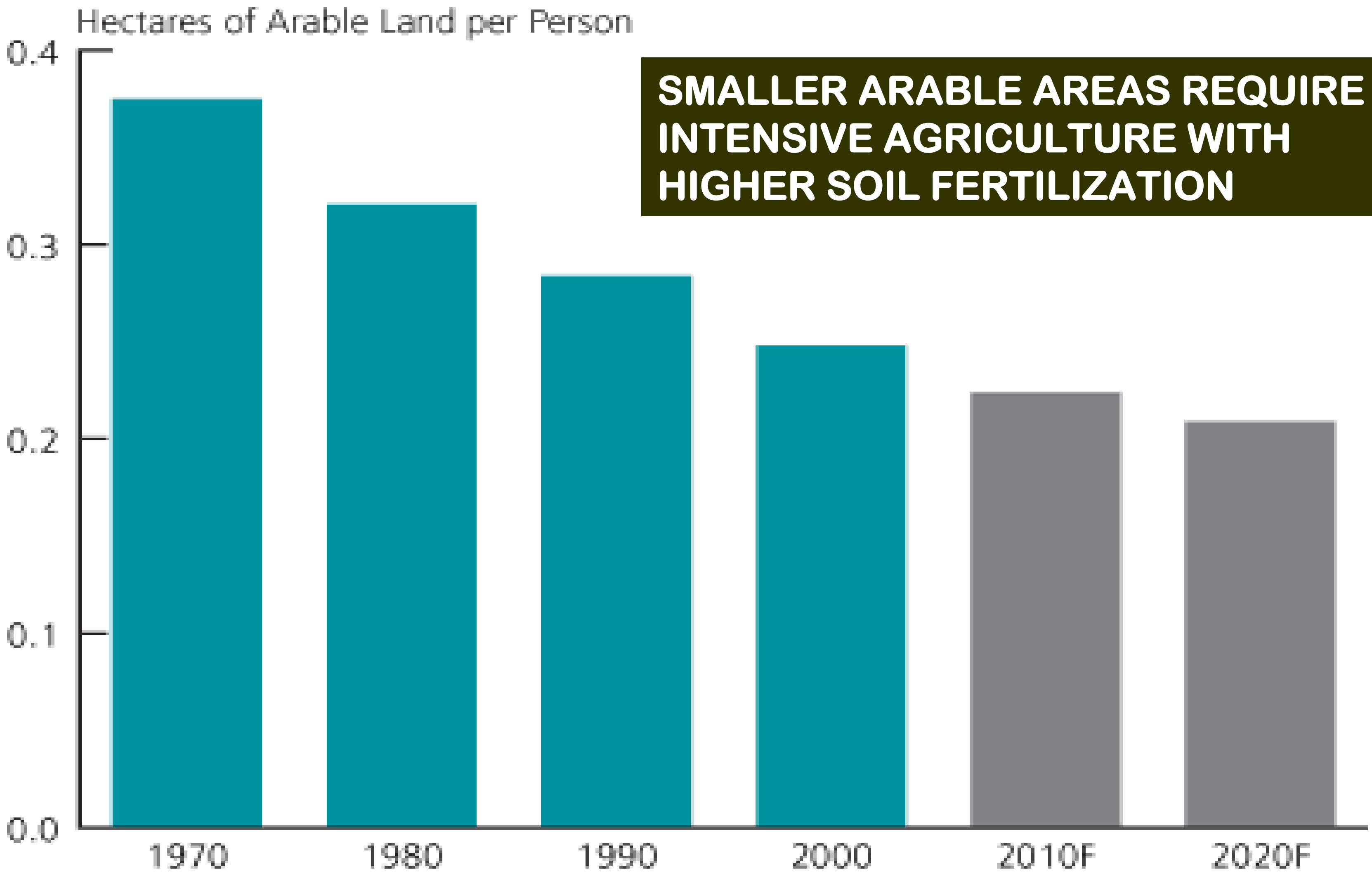
HIGH GRAIN PRICES



Source: USDA, CBOT / Fondsfinans Fertilizer Investor Conference Dec. 2007

5. FERTILIZERS

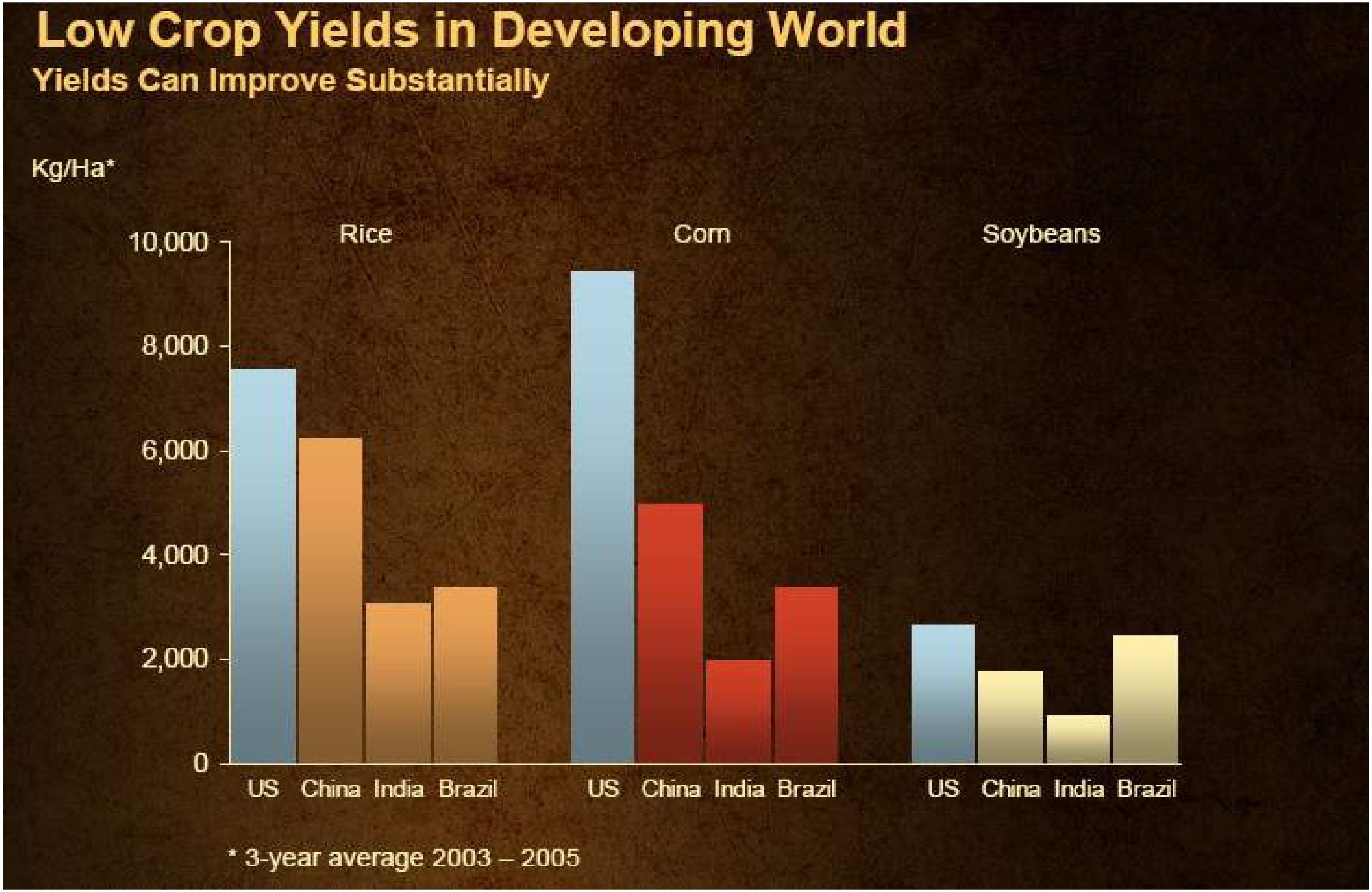
URBANIZATION AND INDUSTRIAL DEVELOPMENT REDUCE ARABLE LANDS



SMALLER ARABLE AREAS REQUIRE INTENSIVE AGRICULTURE WITH HIGHER SOIL FERTILIZATION

Source: FAO, PPI-PPIC, PotashCorp

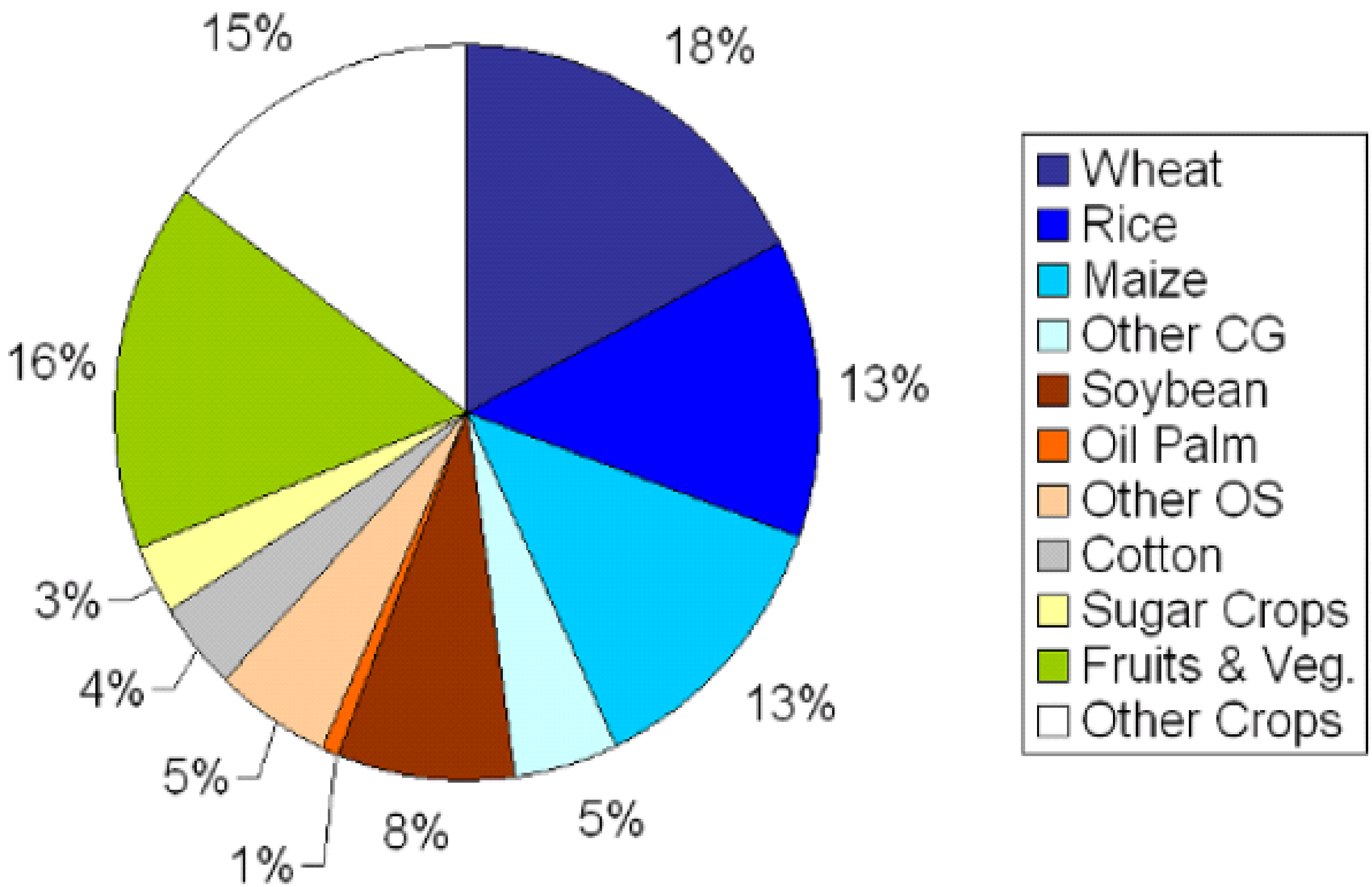
HIGH YIELD GROWTH POTENTIAL IN DEVELOPING COUNTRIES



Source: FAO

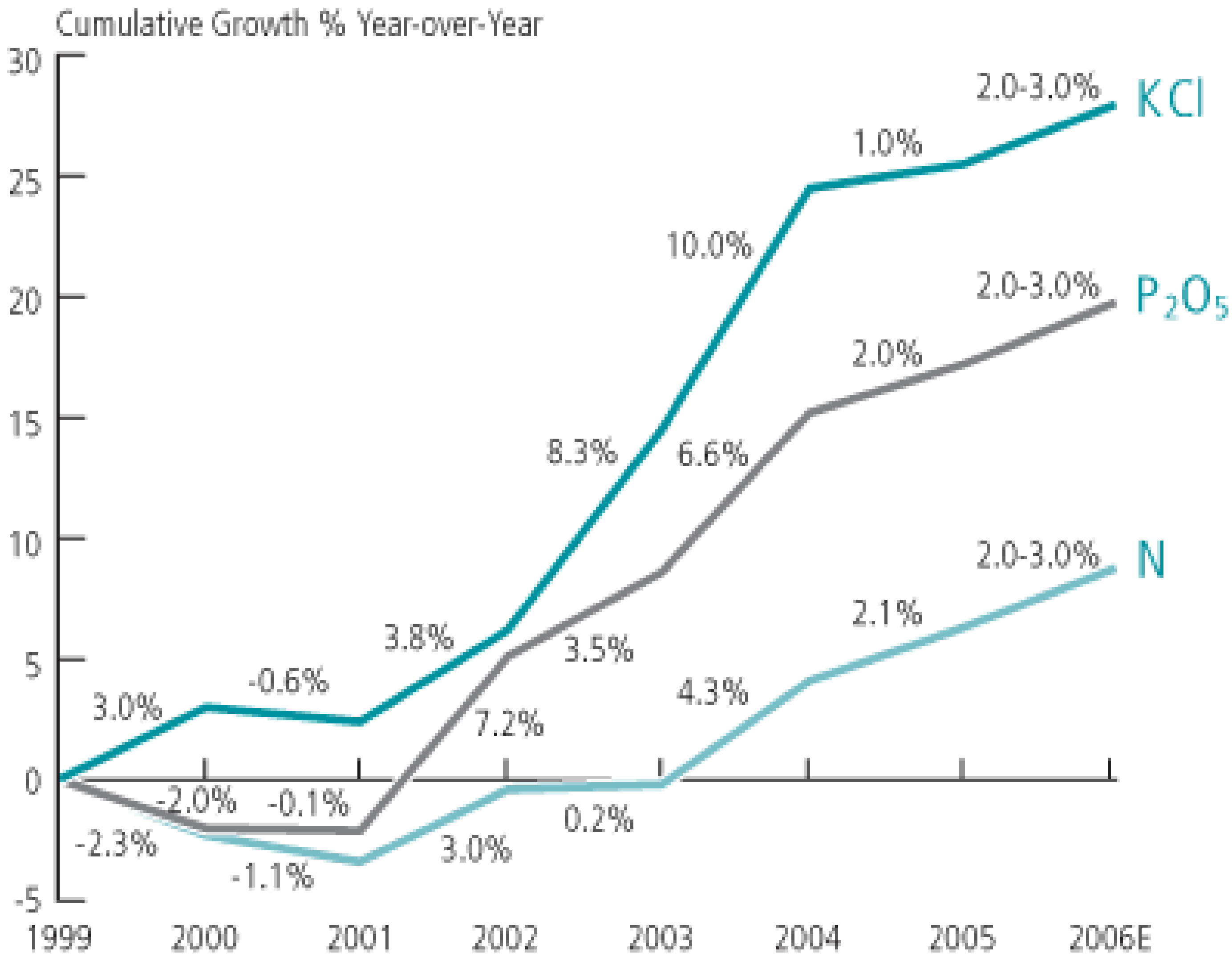
FERTILIZER BY CROP USE

Phosphate Fertilizer Use by Crop at the Global Level



Source: IFA

STRONG GROWTH OF FERTILIZER SALES



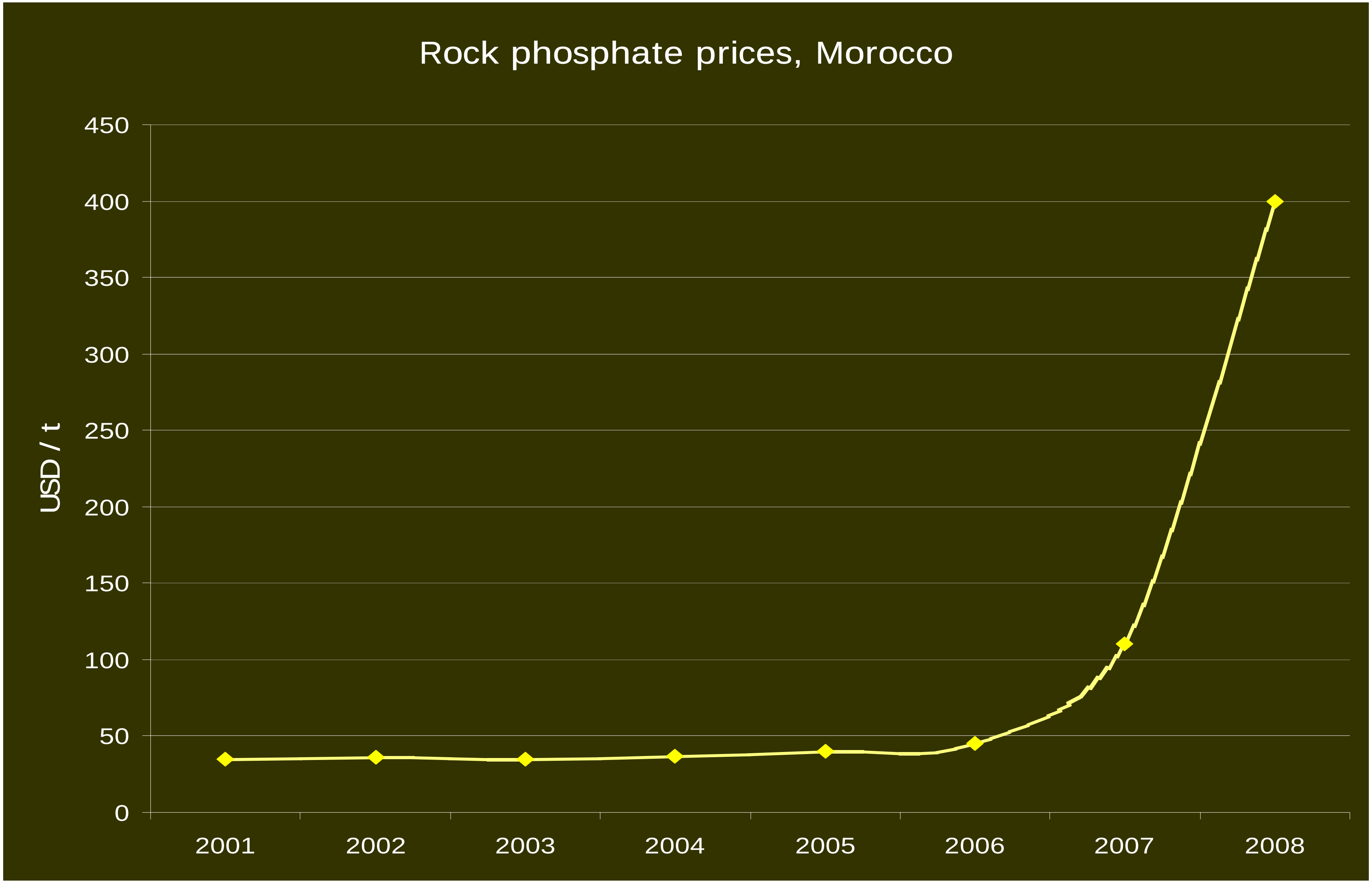
Source: Fertecon, IFA, PotashCorp

CONSUMPTION OF FERTILIZERS IN 2006-2007

Global Fertilizer Consumption				
	2006	Change	2007	Change
Million tons Nutrients				
N	96,9	+4,7%	100,0	+3,2%
P_2O_5	38,6	+4,5%	40,0	+3,8%
K_2O	26,5	+2,1%	28,7	+8,1%
Total	162,0	+4,2%	168,7	+4,1%

Source: IFA

STEEP ROCK PHOSPHATE PRICE INCREASE

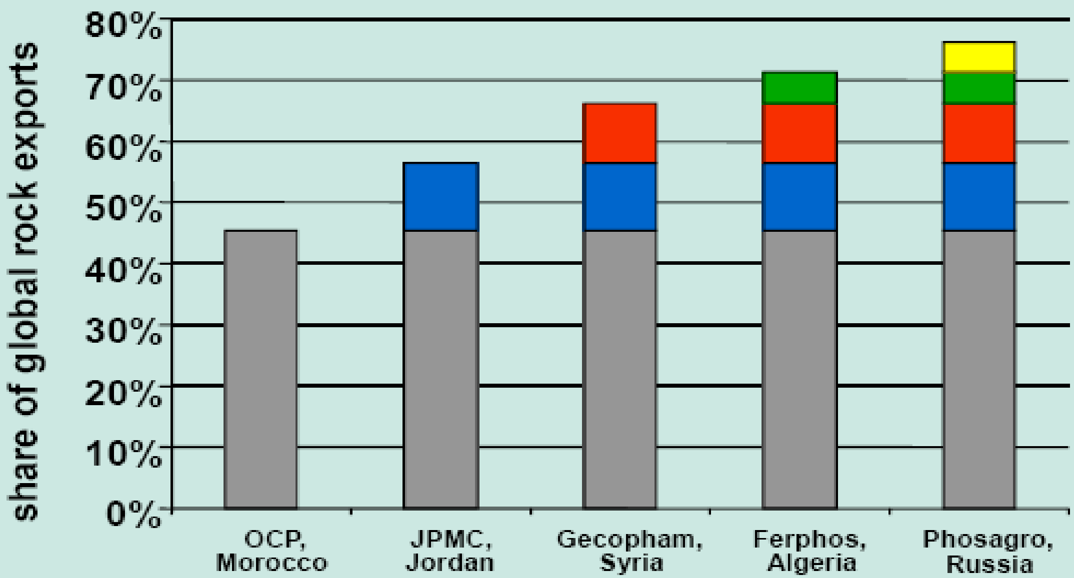


Source: Phosphates 2008 Conference, Paris, Feb. 19-20/2008

ROCK PHOSPHATE EXPORTS CONTROLLED BY FEW COMPANIES

Top five rock exporters = 76% of global trade

–There is a high concentration in the phosphate rock / phosphoric acid/ammonium phosphates, particularly in the export markets.

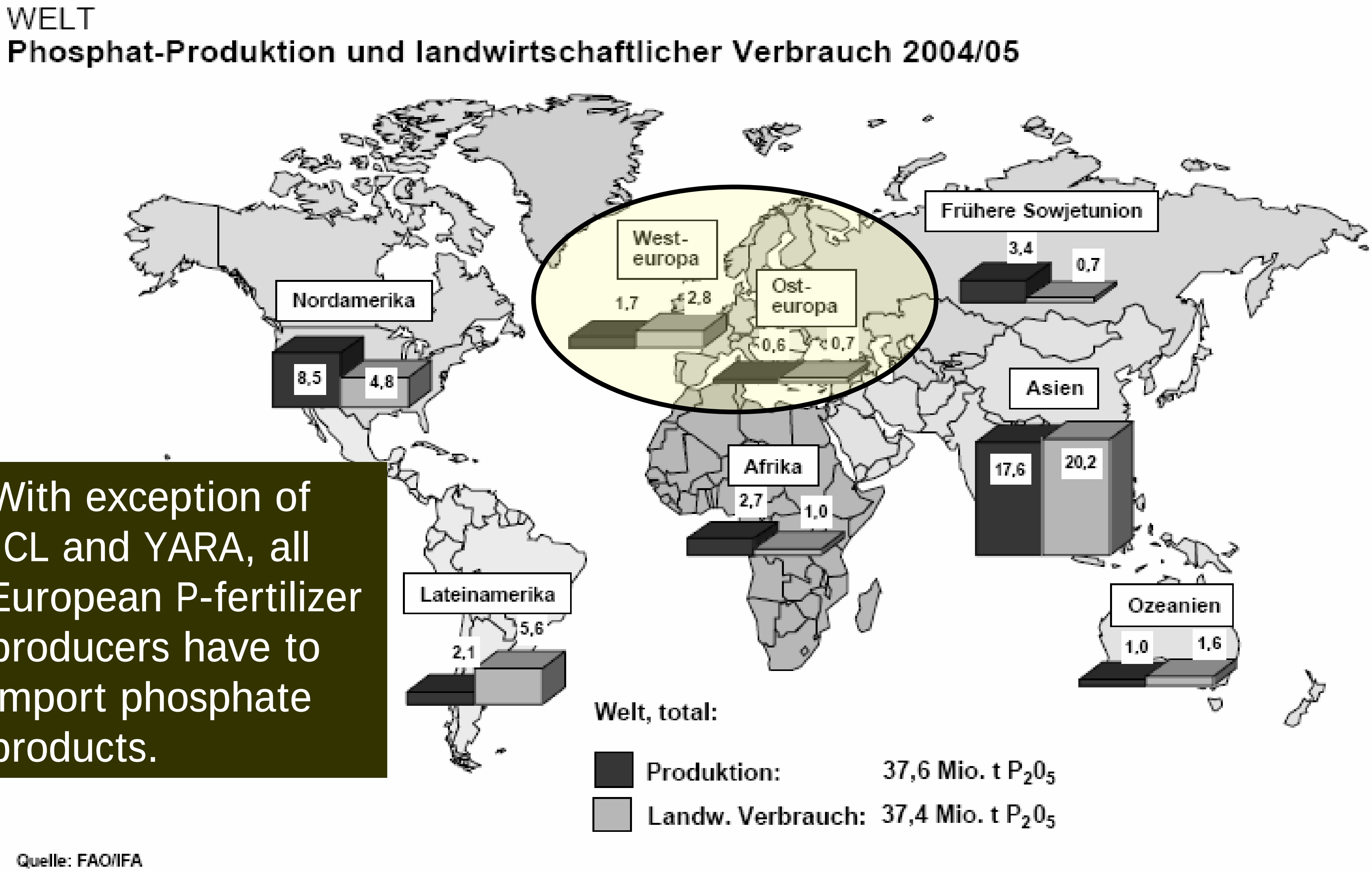


BRITISH SULPHUR | CONSULTANTS
A DIVISION OF CRU

Source: Phosphates 2008 Conference, Paris, Feb. 19-20/2008

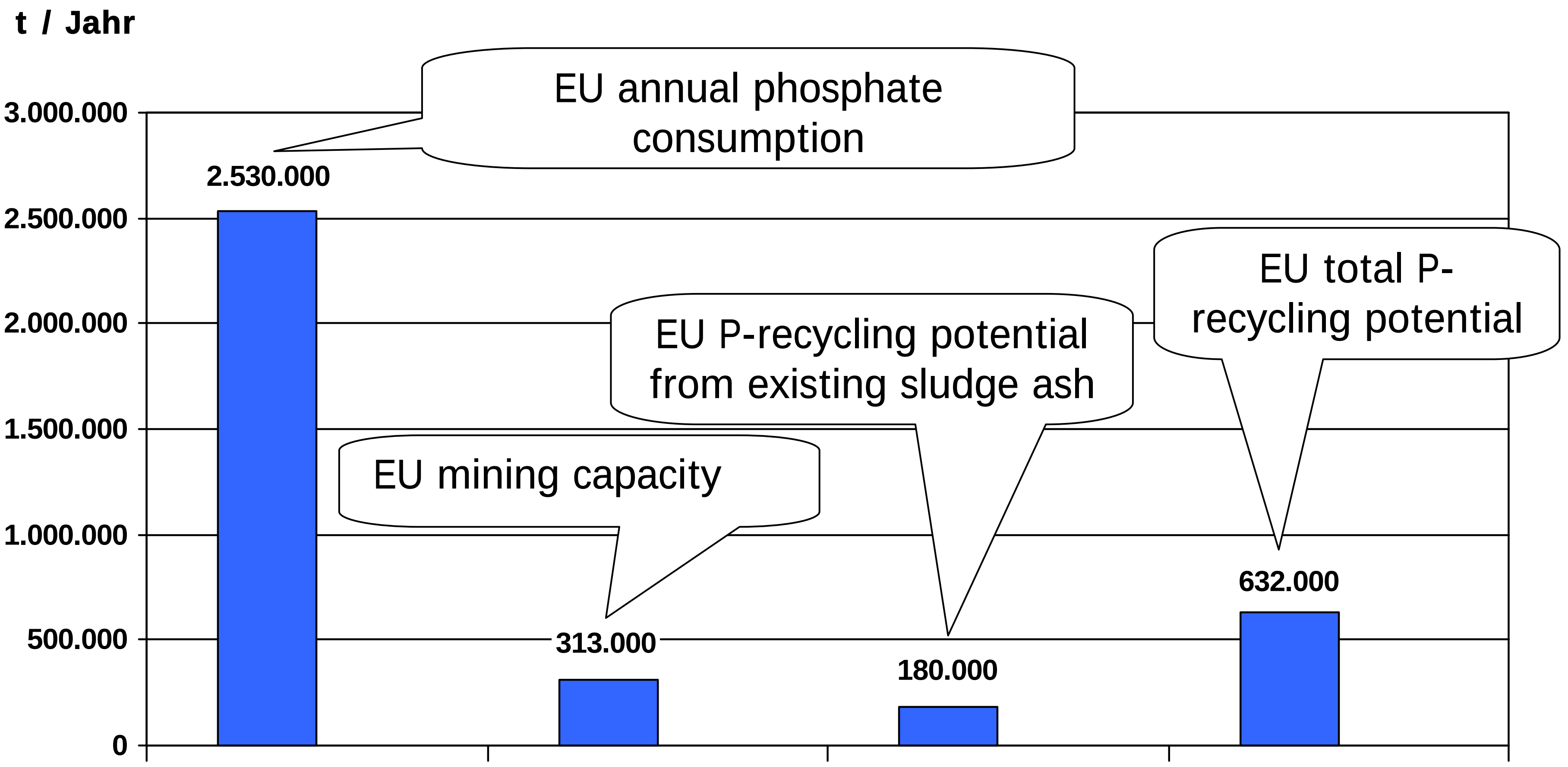
6. URBAN P-RESOURCES

EUROPEAN PHOSPHATE CONSUMPTION EXCEEDS PRODUCTION



With exception of ICL and YARA, all European P-fertilizer producers have to import phosphate products.

EU ANNUAL P_2O_5 MINING & CONSUMPTION



YEAR 2006: EU P_2O_5 CONSUMPTION= 2.530 Mio. t
EU P_2O_5 MINING = 313.000 t

POTENTIAL PHOSPHATE MINING FROM „URBAN“ RESOURCES IN THE EU

10 M t SLUDGE
3 M t MBM

SNB SLUDGE INCINERATOR
Moerdijk/NL

> 989.000 t P_2O_5 can be recycled from sludge and MBM
> 632.000 t P_2O_5 are lost in landfills and other forms of disposal

NEW SLUDGE INCINERATORS IN EUROPE

OPERATOR	LOCATION	to DM p.a.	Status
ARA Tobl	St. Lorenzen (IT)	4.000	Operation
EEF ENSA	Posieux (CH)	10.000	Operation
Stuttgart Mühlhausen	Stuttgart (DE)	30.000	Operation
GUP Vodokanal Süd	St. Petersburg (RU)	50.000	Operation
GUP Vodokanal Nord	St. Petersburg (RU)	60.000	Operation
Thames Water	Belfast (UK)	35.000	Construction
United Utilities	Shell Green (UK)	25.000	Construction
Emter	Altenstadt (DE)	25.000	Operation
Biomasseverwertung	Großwilfersdorf (AT)	5.000	Commissioning
Bazenheid	Bazenheid (CH)	12.000	Construction
ERZ Zürich	Zürich (CH)	33.000	Project
Infraserv Gendorf	Gendorf (DE)	4.000	Operation
AWV Pinneberg	Pinneberg (DE)	4.000	Project
Stadtwerke Crailsheim	Crailsheim (DE)	4.000	Construction
Mosvodokanal	Moskau (RU)	500.000	Project
Kievvodokanal	Kiev (UA)	80.000	Project
Istanbul WWTP	Istanbul (TR)	120.000	Project

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SUSAN

Thank You for Your Attention!

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