

# Outlook For Global Agricultural Markets Over the Next 10 Years

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*Implications for commodity prices and profitability*

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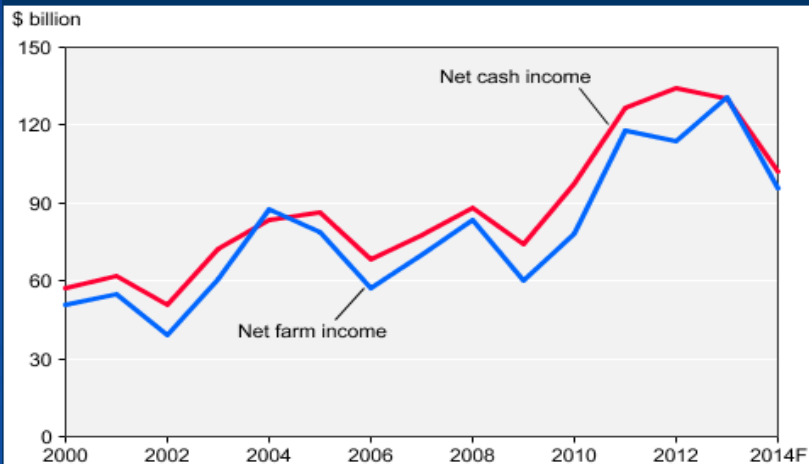
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# U.S. Agricultural Producers' Income Statement and Balance Sheet

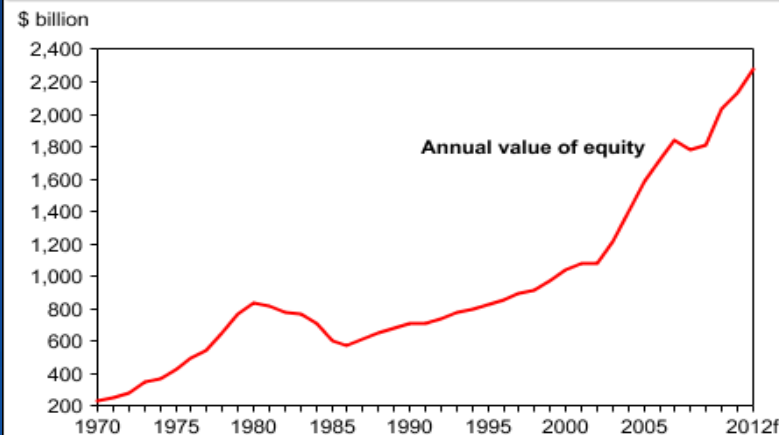
## *Despite rising production expenses, U.S. farmers doing very well*

Net farm income and net cash income, 2000-2014F



Note: Data for 2013 and 2014 are forecasts.  
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.  
Data as of February 11, 2014.

Farm sector equity (net worth), 1970-2012f

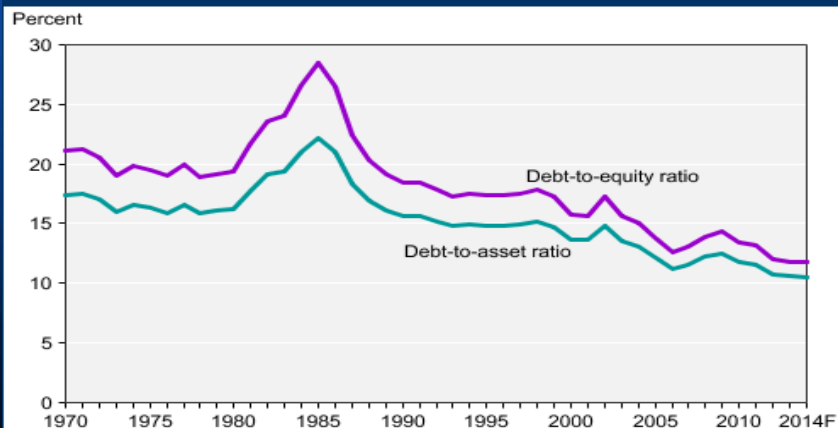


f = forecast.

Source: Economic Research Service, USDA. Data as of November 27, 2012.

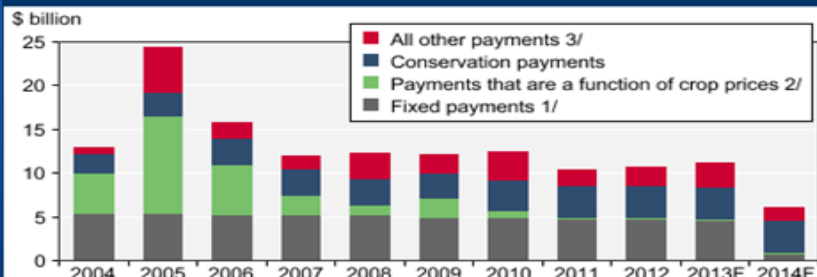


Farm sector debt ratios, 1970-2014F



Note: Data for 2013 and 2014 are forecasts.  
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.  
Data as of February 11, 2014.

Government payments to farm producers, 2004-2014F



F = Forecast.

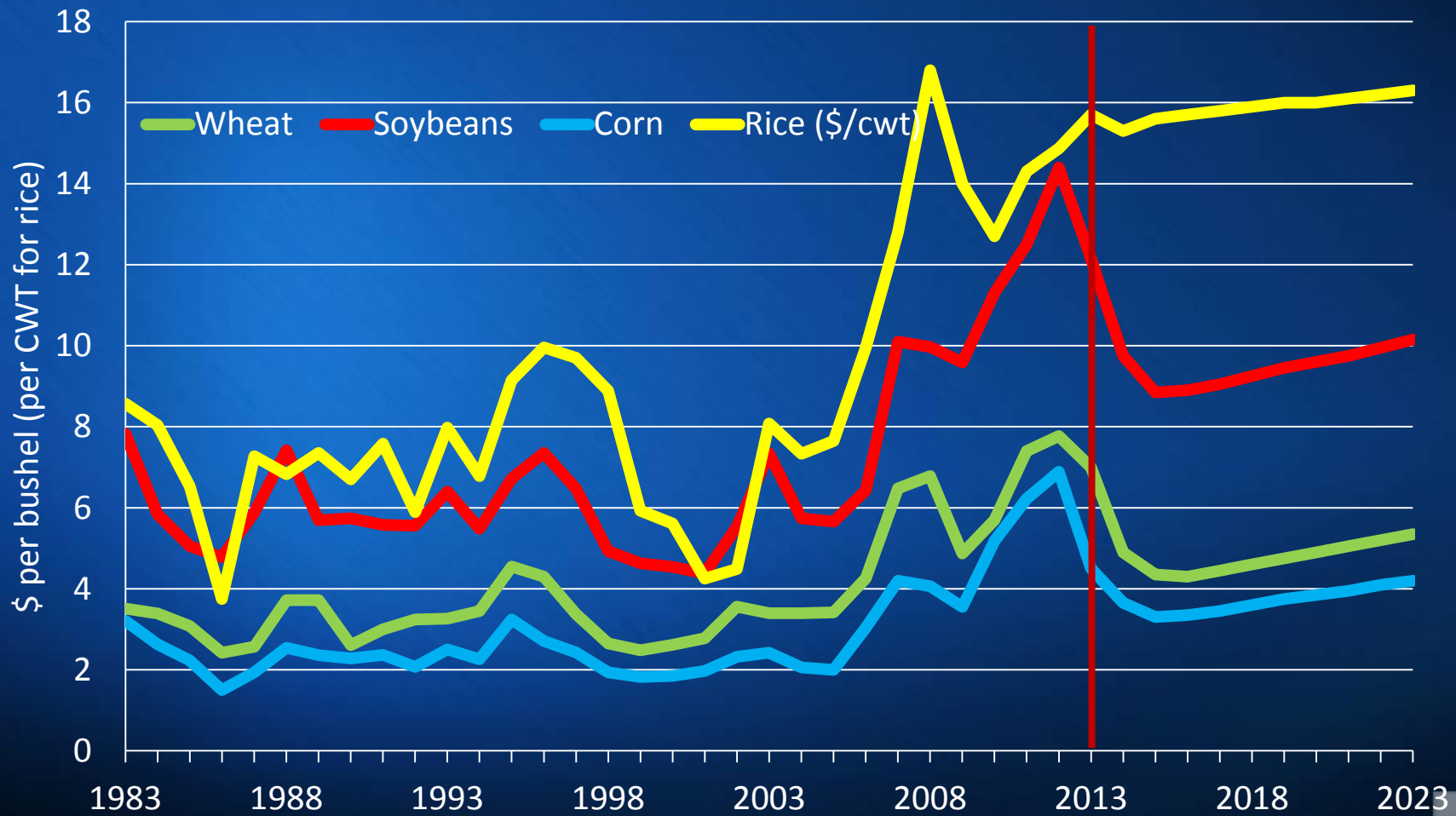
1/ Direct payments are through 2013. Cotton transition payments begin in 2014. Payment rates are fixed by legislation.

2/ Counter-cyclical payments, average crop revenue election (ACRE) payments, loan deficiency payments, marketing loan gains, and certificate exchange gains in which commodity payment rates vary with market prices. The certificate exchange program ended after making payments for the 2009 crop year. Price-related program payments under the Agricultural Act of 2014 would not be made until 2015.

3/ All other payments include disaster relief payments, tobacco transition payments, and dairy program payments.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.  
Data as of February 11, 2014.

# Most Crop Prices Expected to Soften Over Next 10 Years...

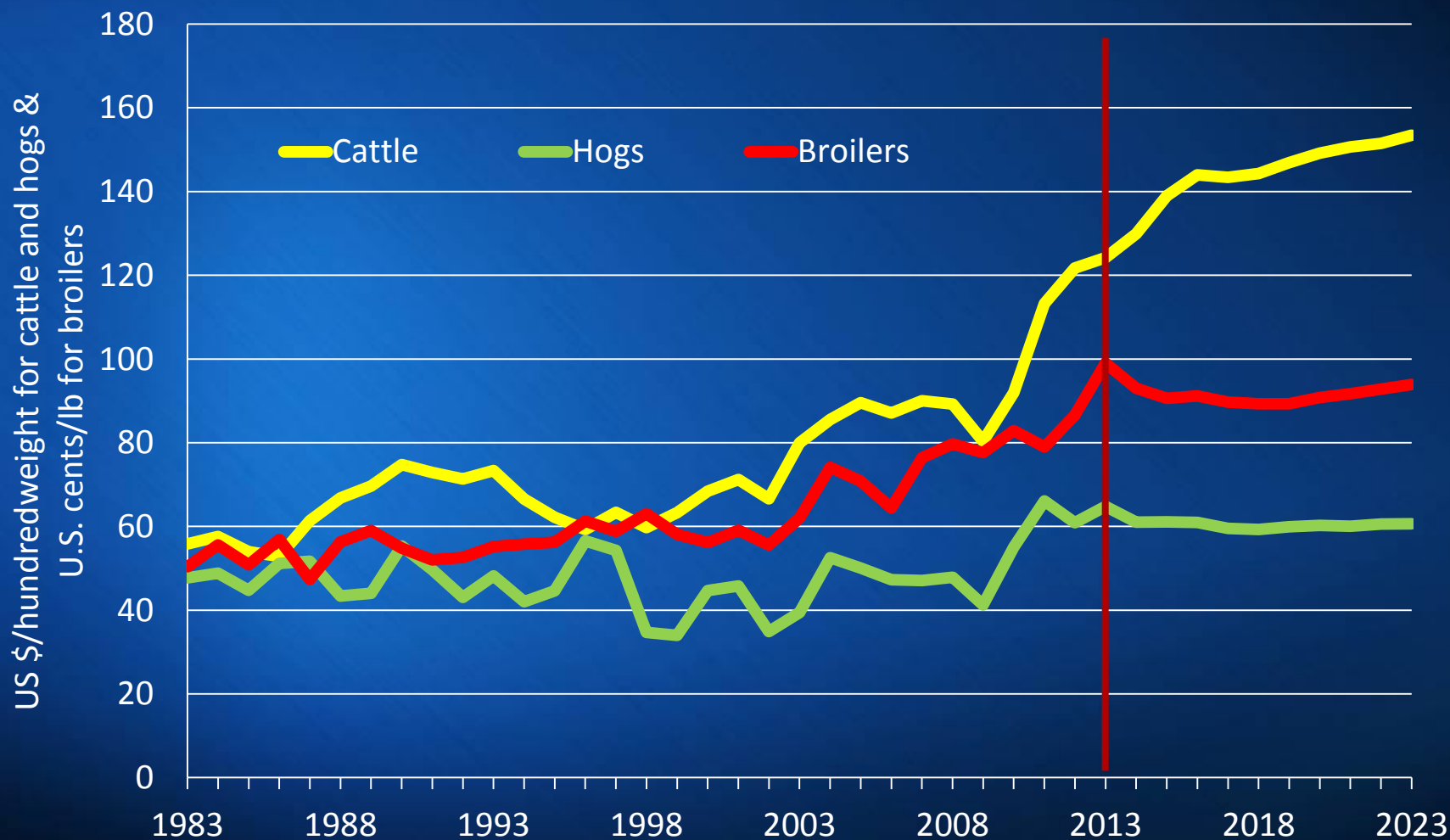


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# Different Story For Red Meat and Poultry Prices

*Beef prices expected to continue rising while pork and poultry prices remain high*



# The Long-Term Outlook for Farm Sector Profitability Is Still Good ... But Reduced From 2011-13 Levels

*Global demand projected to keep long run U.S. net farm income strong*



# Factors Impacting U.S. and Global Food and Agricultural Markets Over the Next Decade

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1. Global economic growth and the rise of the “middle class” in developing countries
2. Value of the U.S. dollar
3. Worldwide biofuels production
4. Role of trade and trade liberalization
5. Energy and agricultural input prices
6. Additional crop land
7. Biotech developments





# #1: Growing Middle Class in Emerging Markets Will Stimulate Demand

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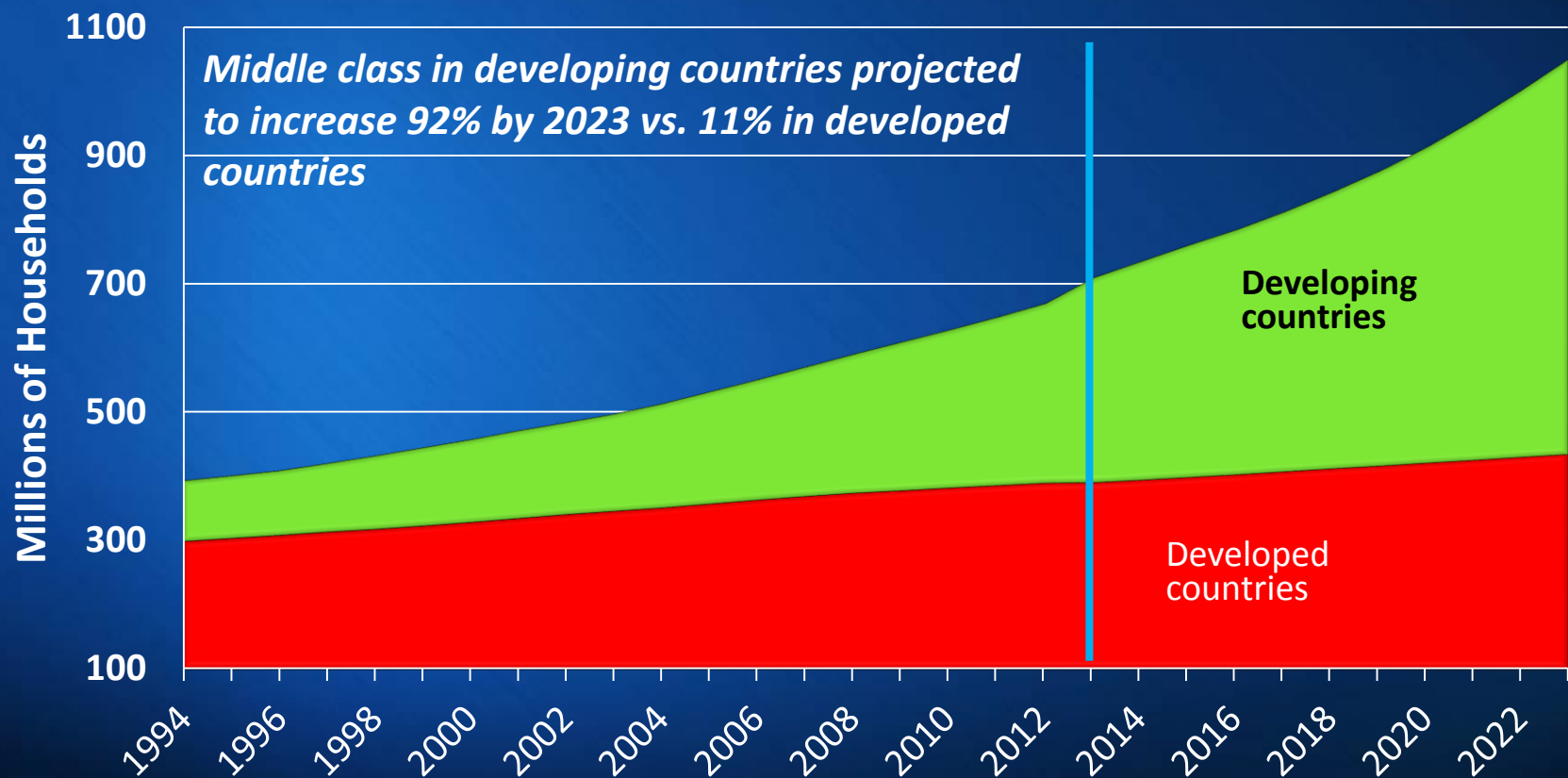
- By 2025, 53% of the world's households will have joined the middle class (greater than real PPP incomes of \$20,000/yr).
- Global economy emerged from worst recession in decades in 2010. Despite recent challenges, developing countries performed better and growing faster than developed countries.
- Impact on global food demand will be significant due to higher income elasticities for food in developing countries.



# Global “Middle Class” is Expected to Exceed 1 Billion Households by 2023

*Most of the increase will be in developing countries, particularly in Asia*

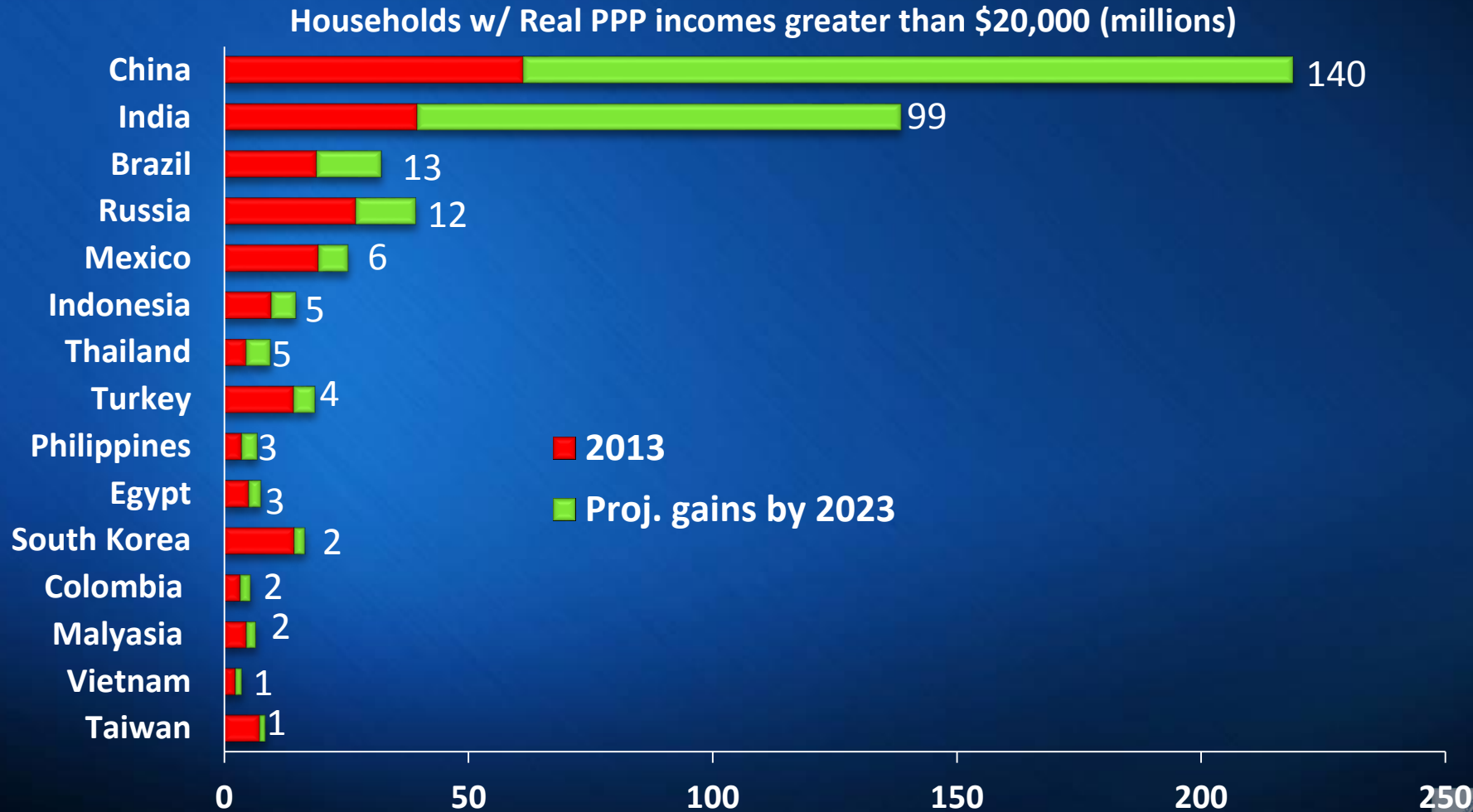
Households w/real PPP incomes greater than \$20,000 a year





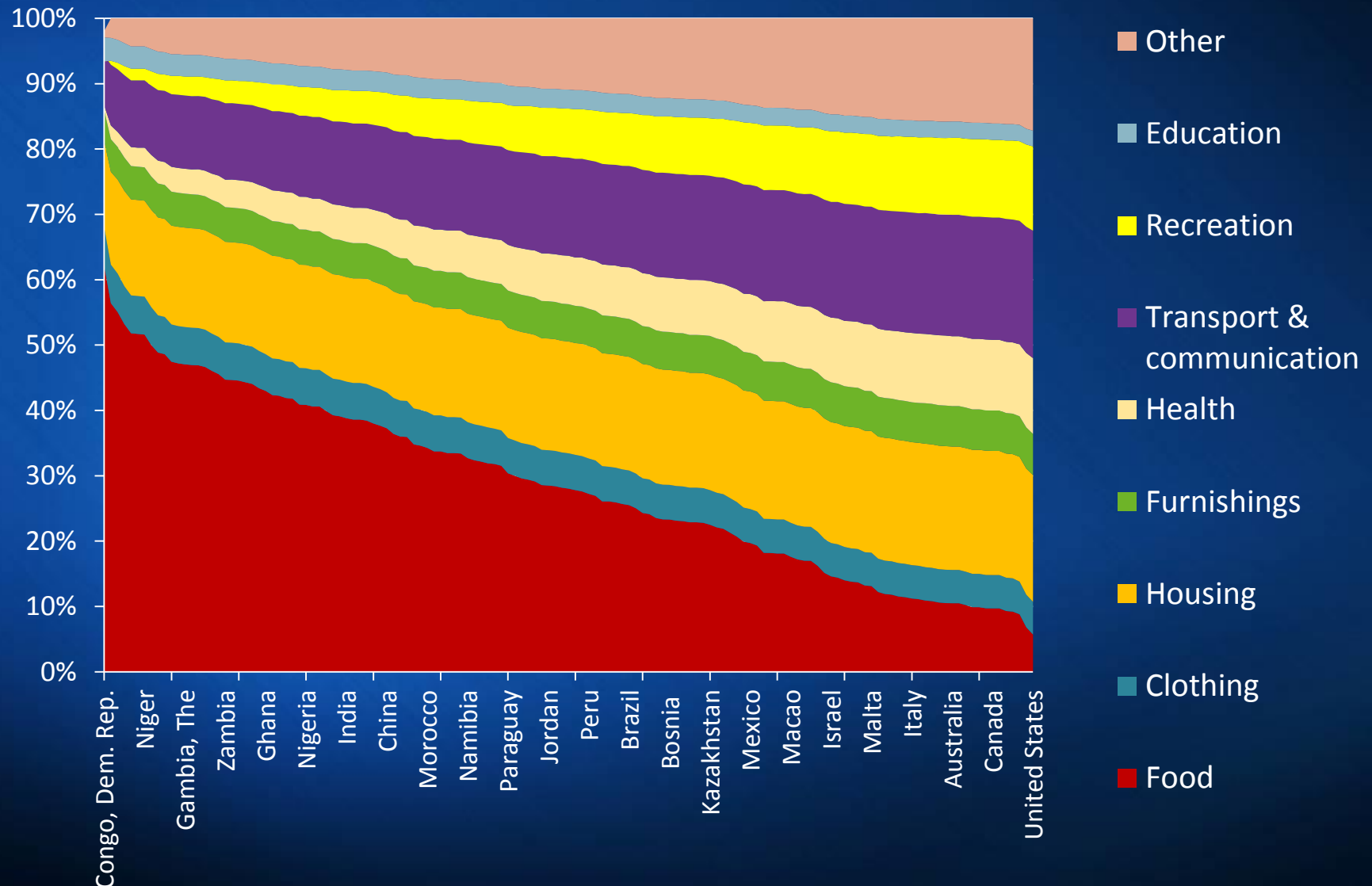
# “Middle Class” in Developing Countries to Exceed 600 Million Households By 2023, Up 92% From 2013

*China, India dominate the outlook but growth is everywhere*



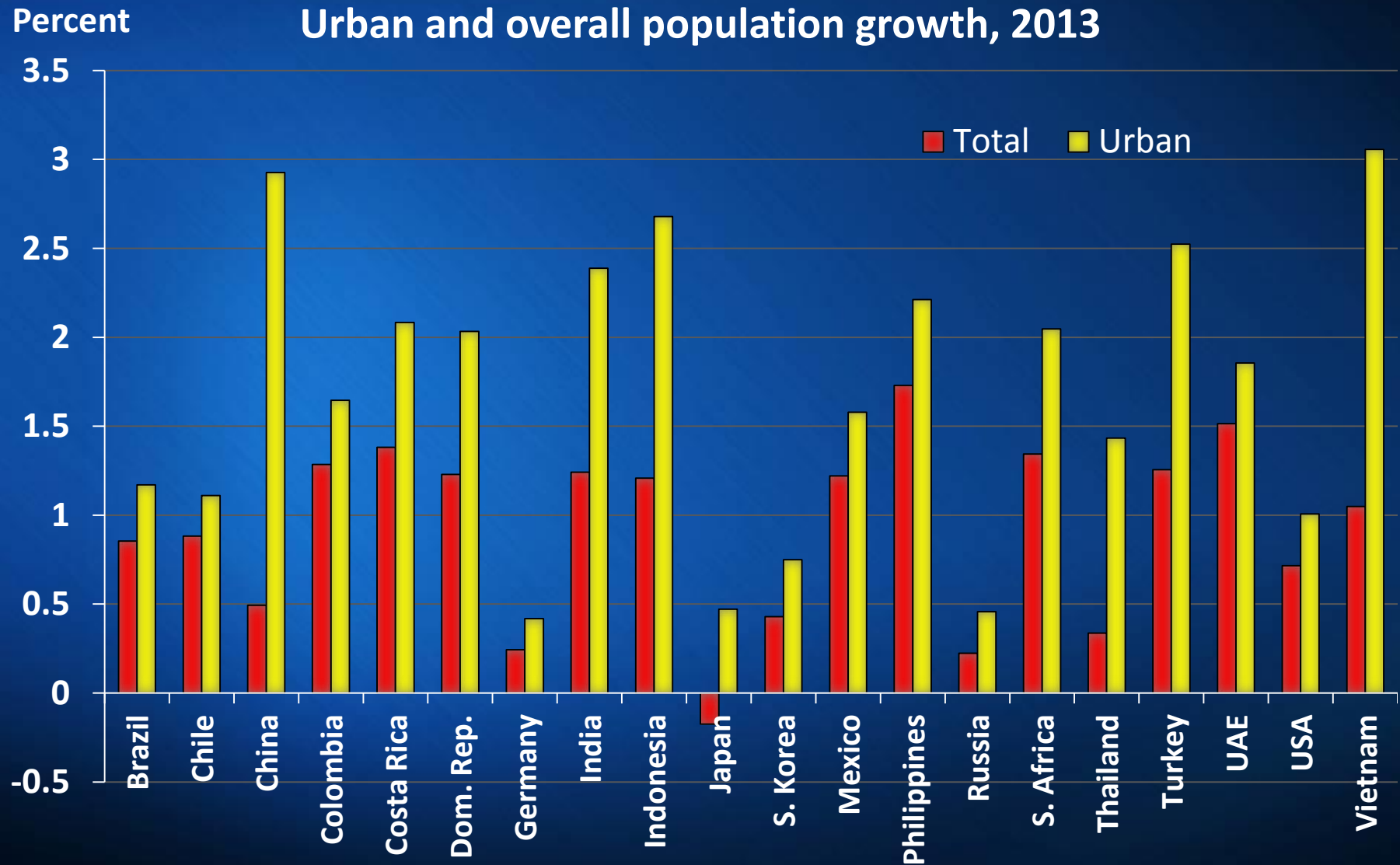
# Additional Dollar of Income: How Is It Spent?

*Lower income countries spend much of that additional income on food*



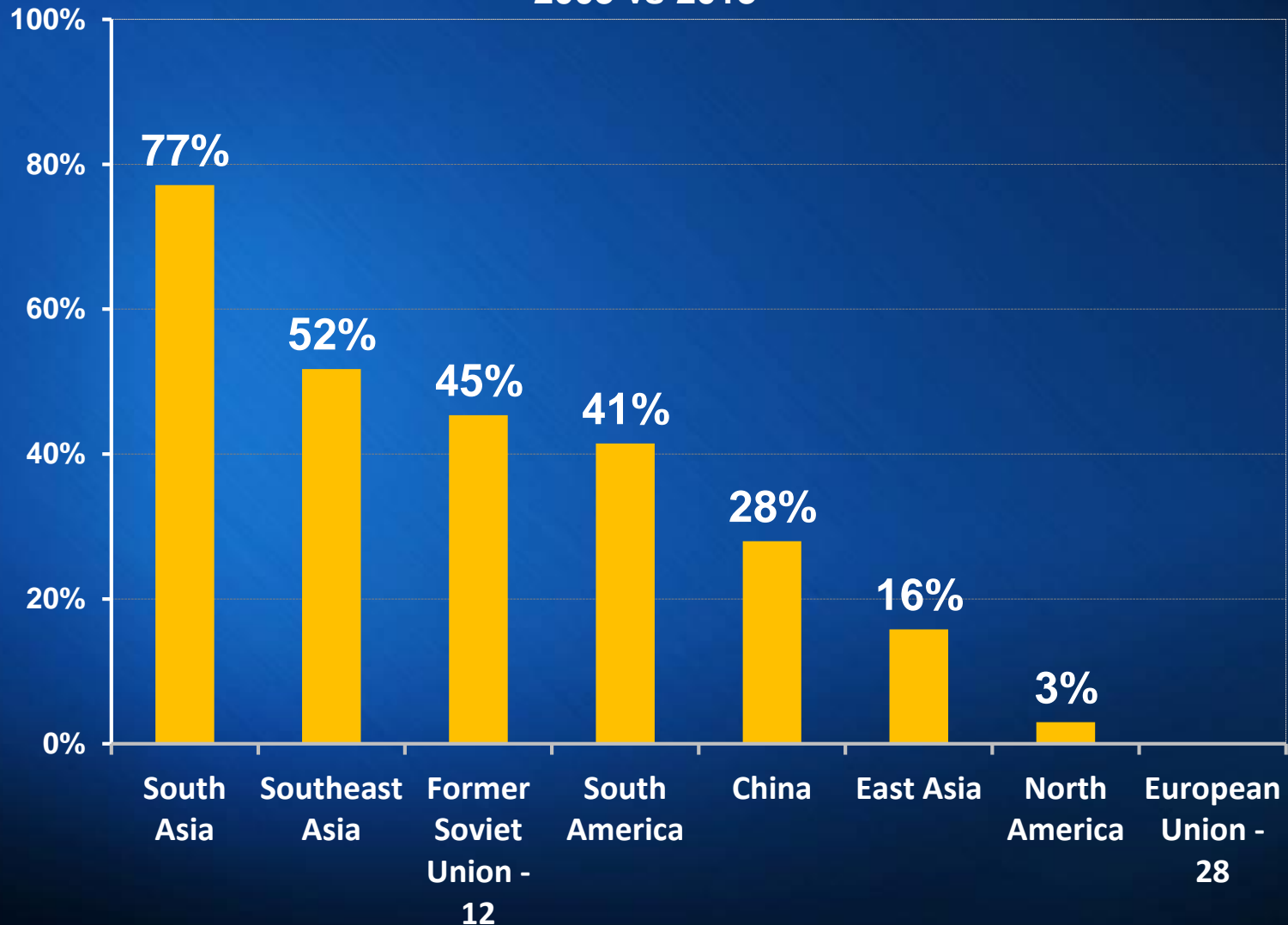
Source: USDA, Economic Research Service using International Comparison Program 2005 data.

# Urbanization Also Drives Consumption Change



# Meat Demand Growth Focused in Developing Countries

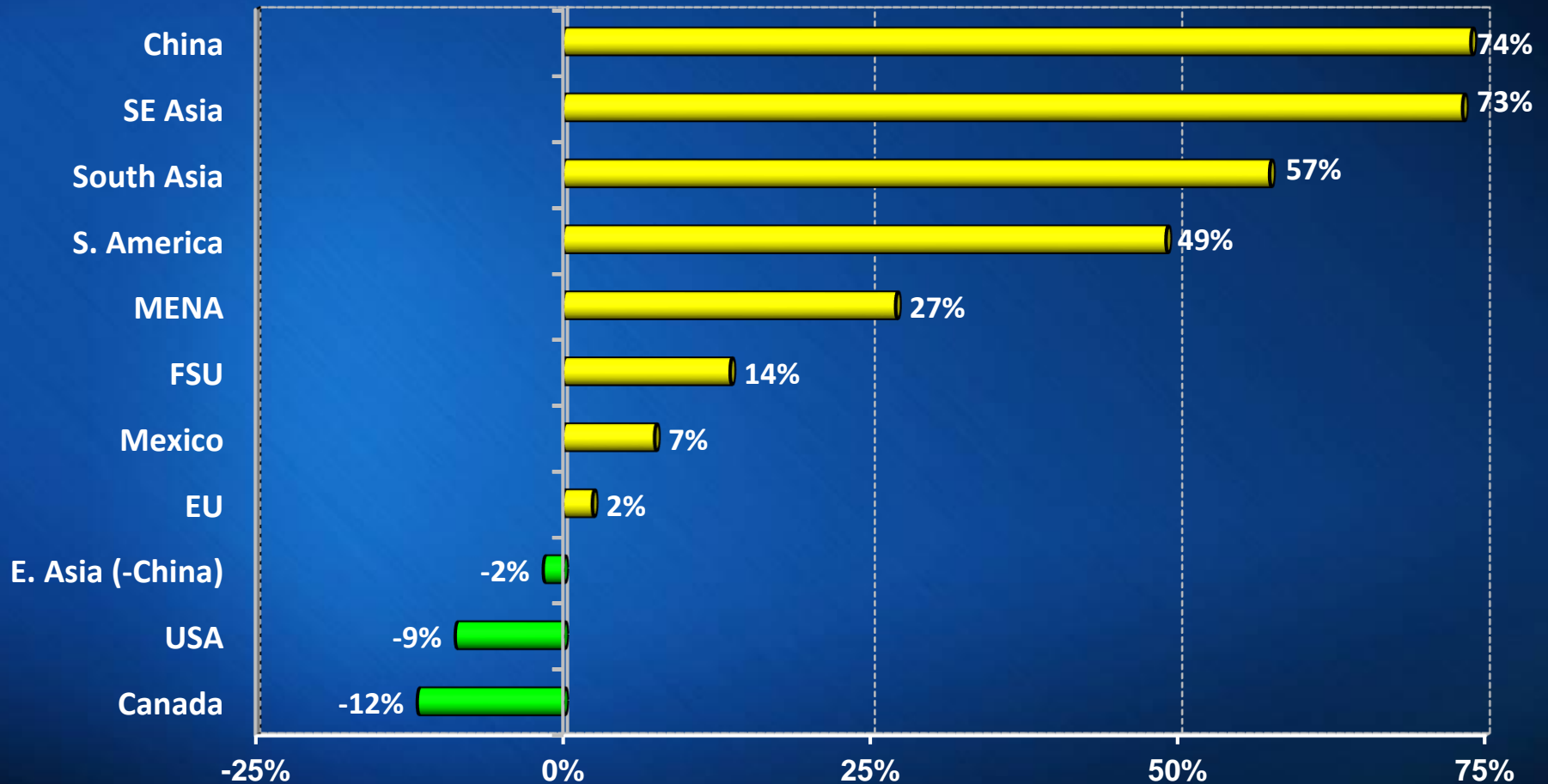
Changes in Beef, Pork, and Poultry Consumption  
2003 vs 2013



Source: USDA Production, Supply & Distribution Database

# ... Which Leads to Rising Feed Demand In Developing Markets

Changes in Grains and Oilseed Meals in Feed Consumption  
2003 vs 2013



## # 2: Value of the Dollar Expected to Rise ... Putting Downward Pressure on Commodity Prices

US Agricultural Trade-Weighted Exchange Rate

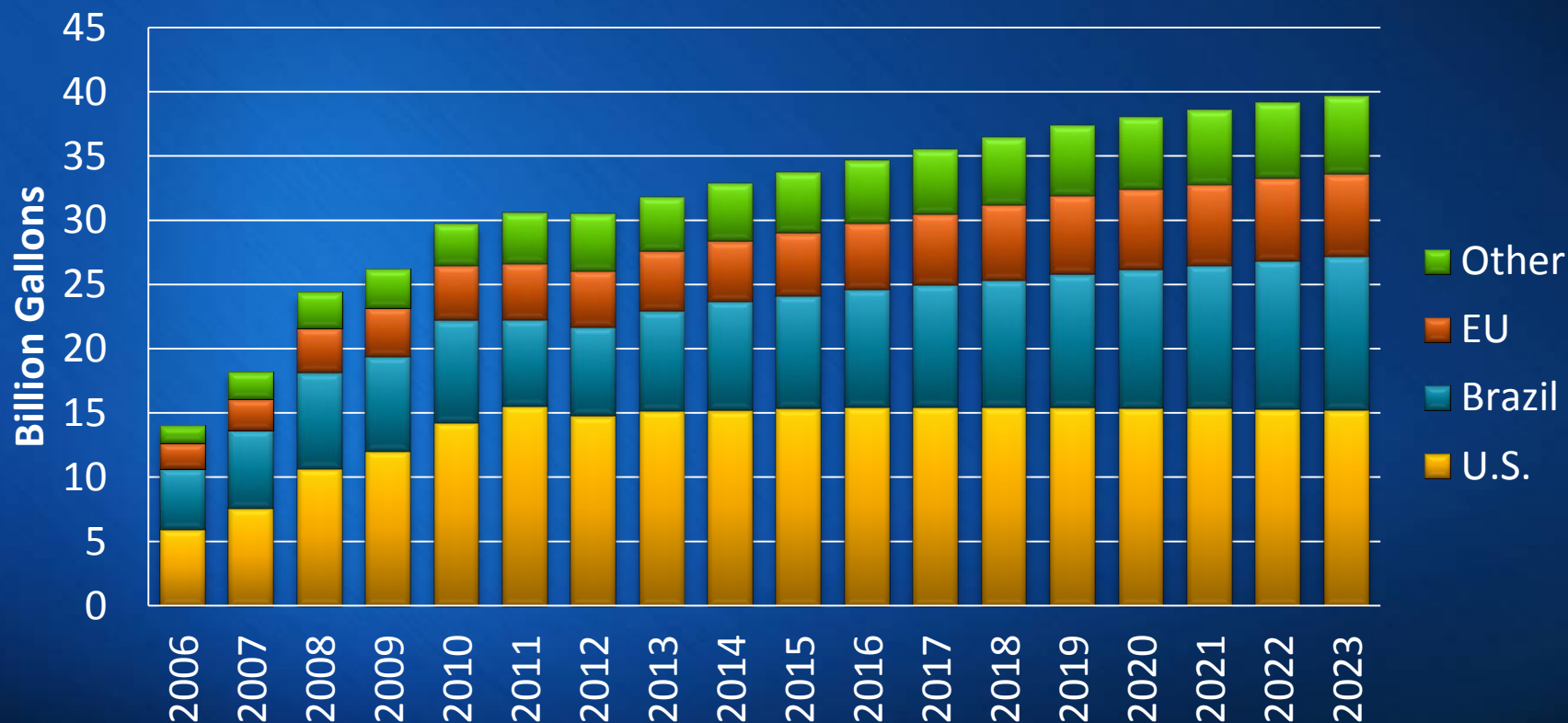




# #3: Biofuels Production Continues to Grow ...

*But rate of growth during 2006-2010 is expected to slow*

## Top Biofuel Producers



Sources: FAS Overseas Posts & FAS/W Staff Analysis consistent with USDA Long-term Agricultural Projections. Excludes ethanol for use in human consumption (beverages).

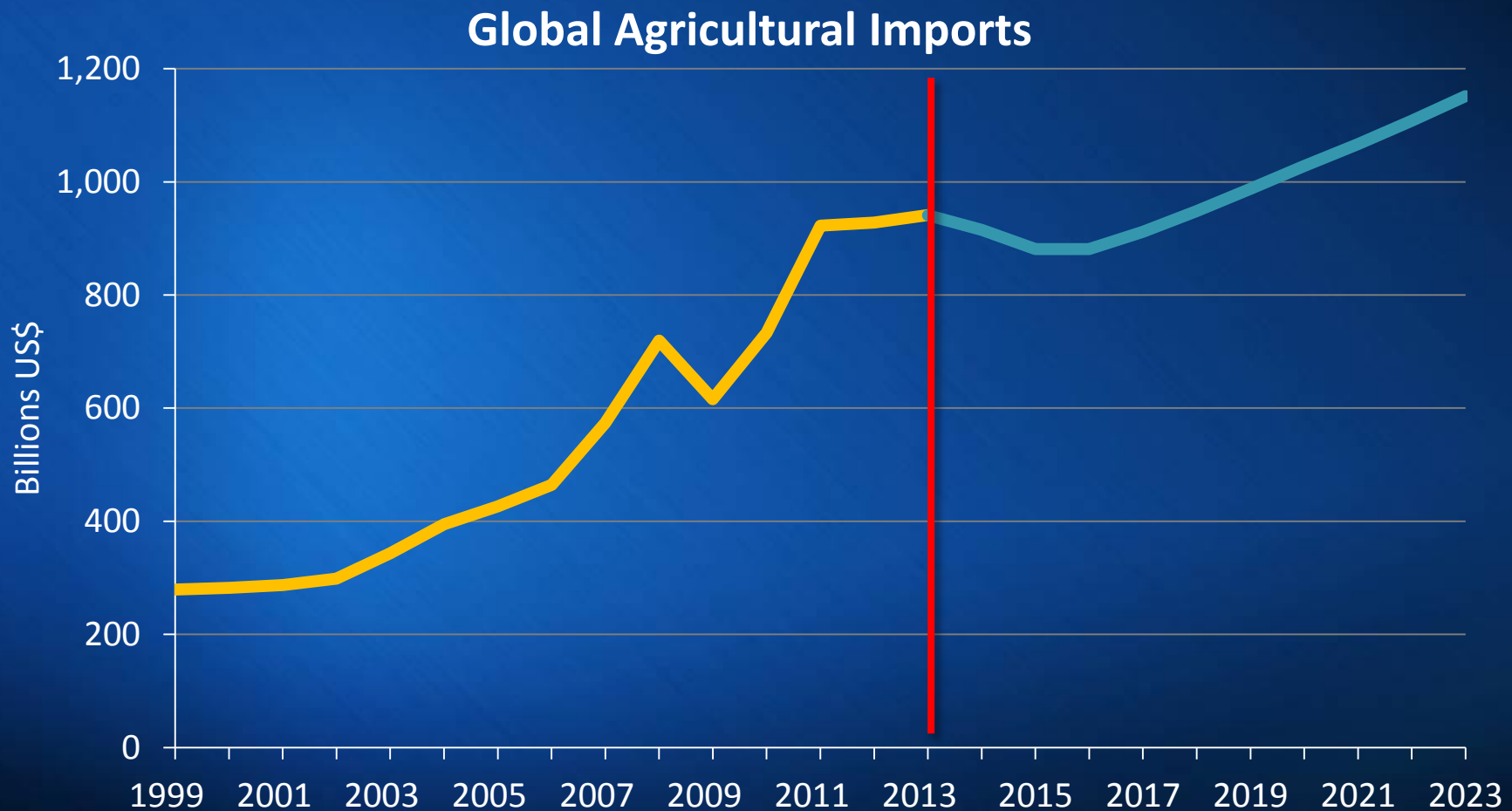
# #4: Trade Will Increase and Trade Liberalization Will Continue

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- Global agricultural trade has grown sharply over the past decade -- should reach \$1.2 trillion over next decade.
- Most countries' agricultural imports have increased substantially, esp. China and East/Southeast Asia. U.S. and EU imports growing, too particularly for consumer-oriented, high value foods.
- Almost all major agricultural exporters have seen sharp gains in recent years – not just the U.S.
- FTAs have proliferated worldwide, boosting trade. This will continue -- with or without the U.S.



# Global Agricultural Trade Projected to Reach Nearly \$1.2 Trillion Over Next Decade



# Global Agricultural Import Growth Most Pronounced in Developing Markets



Source: GTIS and FAS projections

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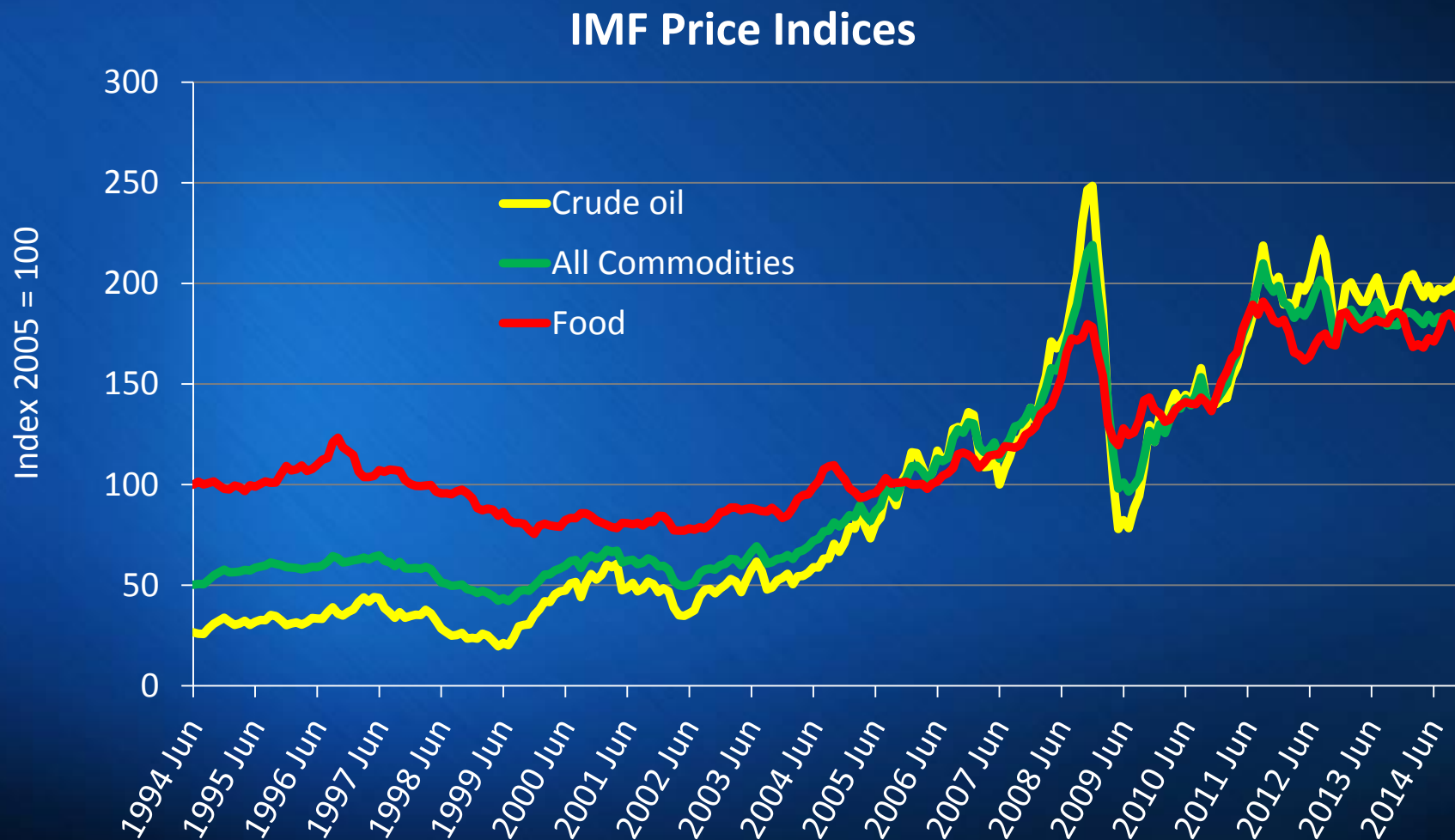
## #5: Energy and Agricultural Input Prices Likely To Remain High

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- Commercial scale agriculture is energy and input intensive – planting, growing, harvesting, transporting, processing, packaging.
- In recent years, input prices have risen in response to strong growth in global demand for energy and ag products. Prices of diesel, fertilizer, seed, and agricultural chemicals have risen.
- Land rental rates are rising as well as value of farmland rises, thus adding to production cost pressures.
- Rising costs pressure farmers' operating margins -- expected to continue as expenditures rise faster than cash receipts thru 2023.



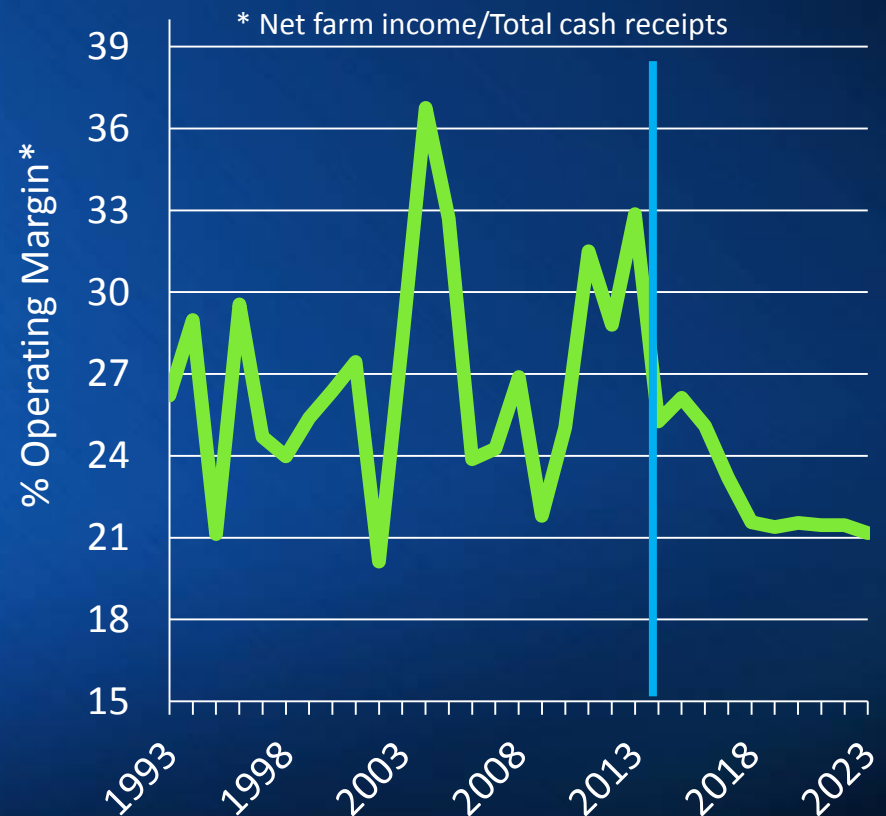
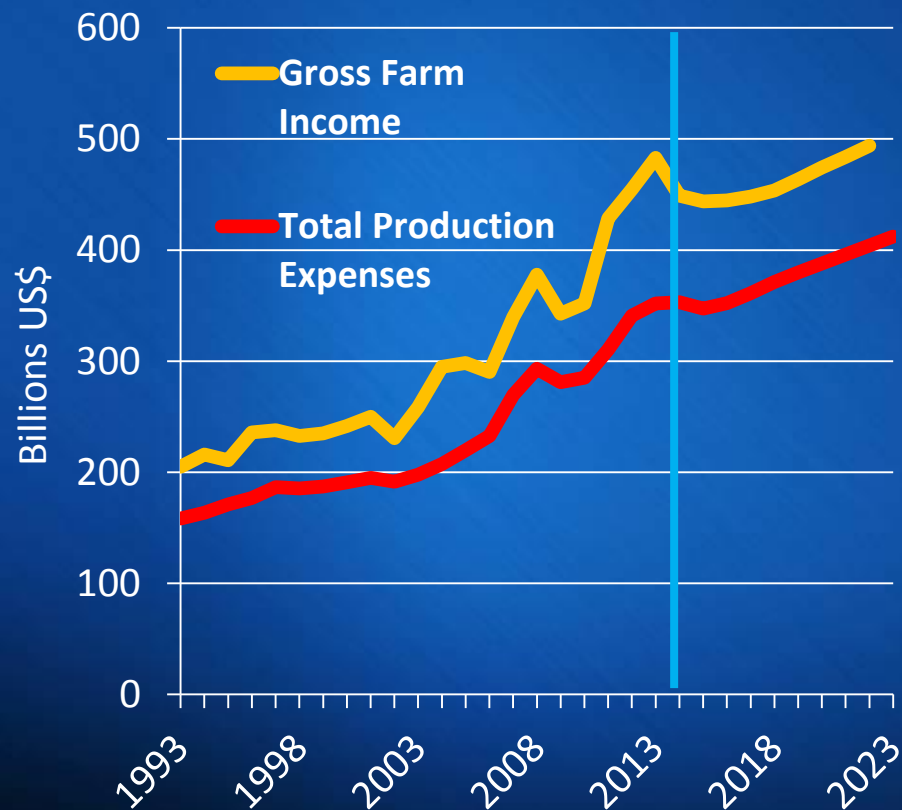
# Higher Energy Prices Contribute to Higher Food and Agricultural Commodity Prices





# U.S. Operating Margins Will Be Pressured By Rising Production Expenses

*Softening commodity prices over much of the next 10 years, combined with rising production costs, will significantly reduce operating margins through 2023*



## #6: Planted Acreage Will Increase ... Some

*Most of the increase in production will come from yield growth but some will come from new land under cultivation or double cropping of existing land*

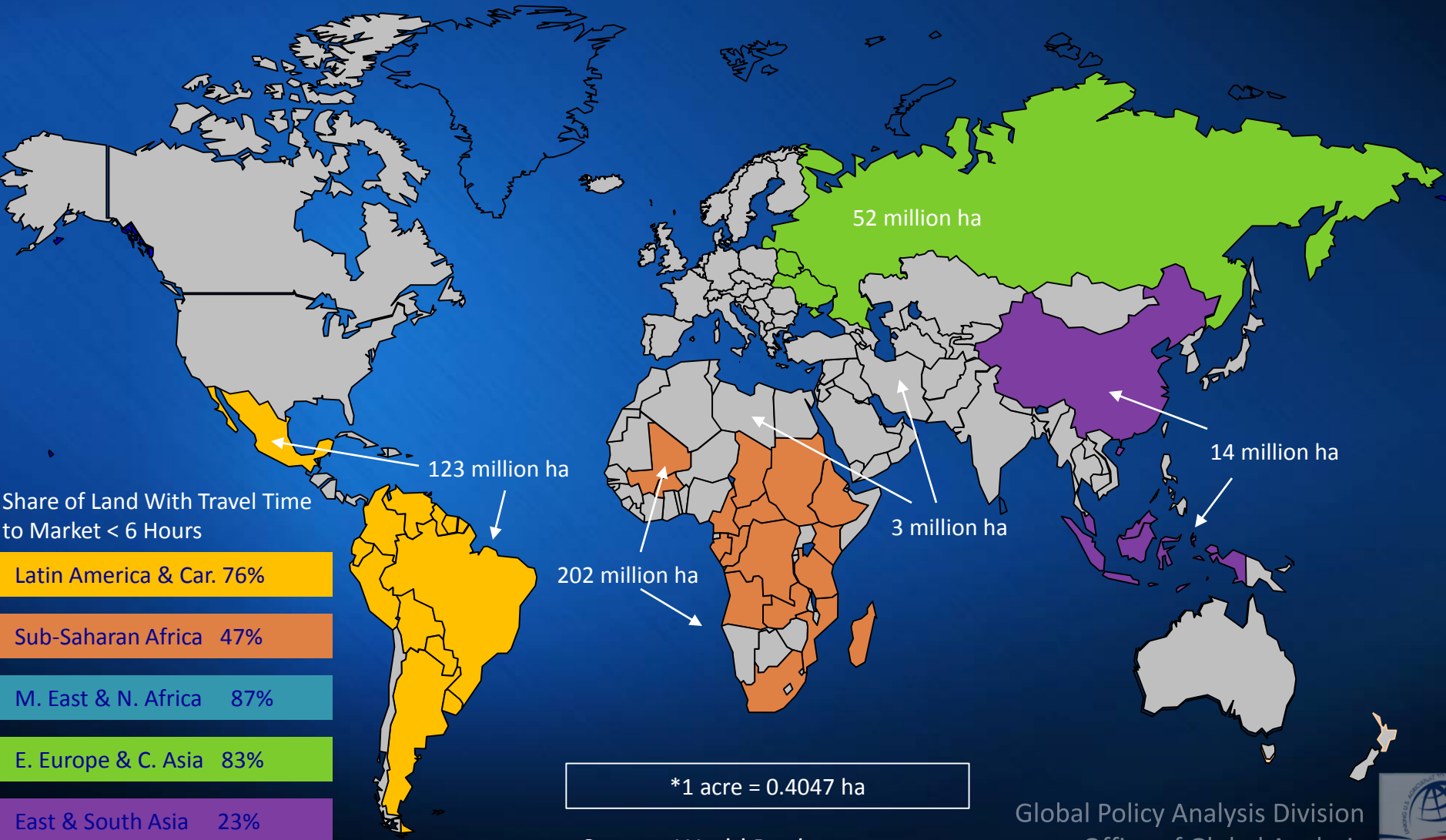
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- *Where will the increase in land under cultivation occur?* Storage and transportation infrastructure and marketing costs will play a big role.
- Also, land tenure issues, laws governing foreign investment, and the degree of price transmission will be major issues.
- South America will likely lead in land expansion (largely new frontier lands in Brazil) as will parts of the Former Soviet Union (esp. Russia and Ukraine). New tech is boosting the role of double cropping.
- Africa has more uncultivated land but high marketing costs, poor infrastructure, and long distances from markets will be a constraint.



# Potential Availability of Uncultivated Land

Globally 446 million hectares of uncultivated land (1.1 billion acres\*)



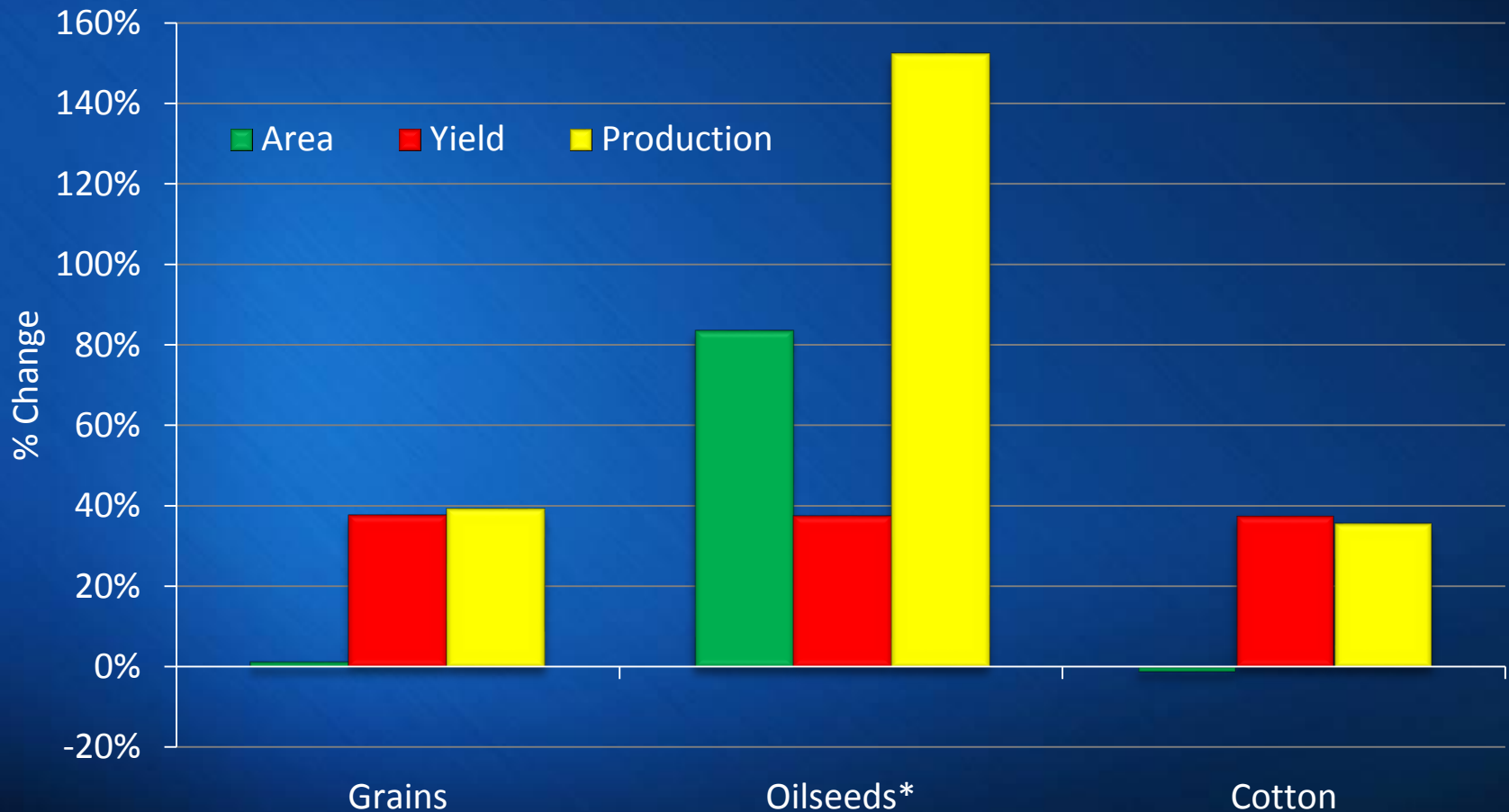
Source: World Bank

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# Global Production Gains Since 1990 Due Largely to Yield Growth

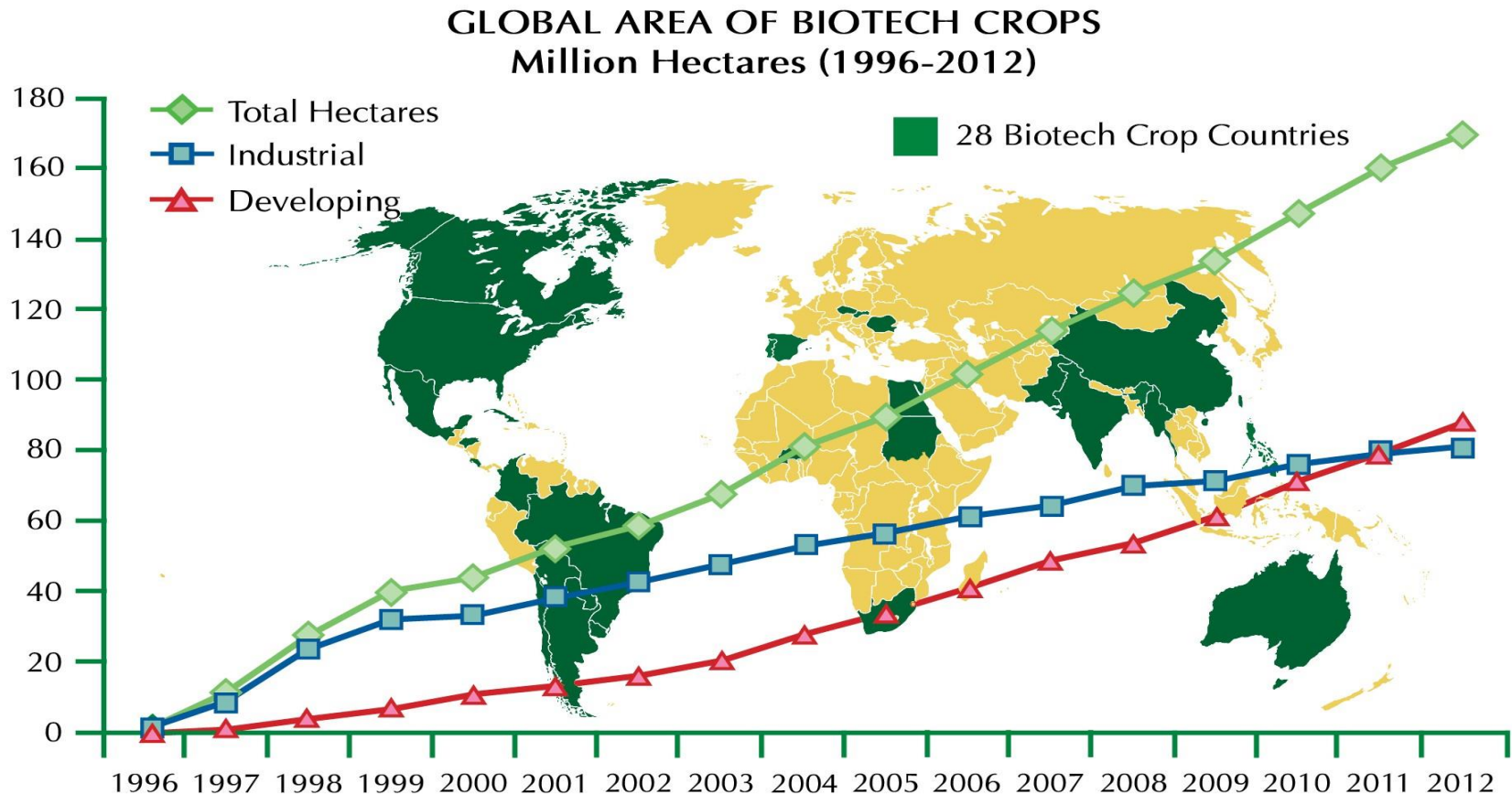
*The big exception is for oilseeds (especially soybeans) due to booming Chinese demand which caused a significant increase in planted acreage in Brazil*



\*Includes soybean, sunflower, rapeseed, and peanut



# #7: Role of Biotechnology Will Grow



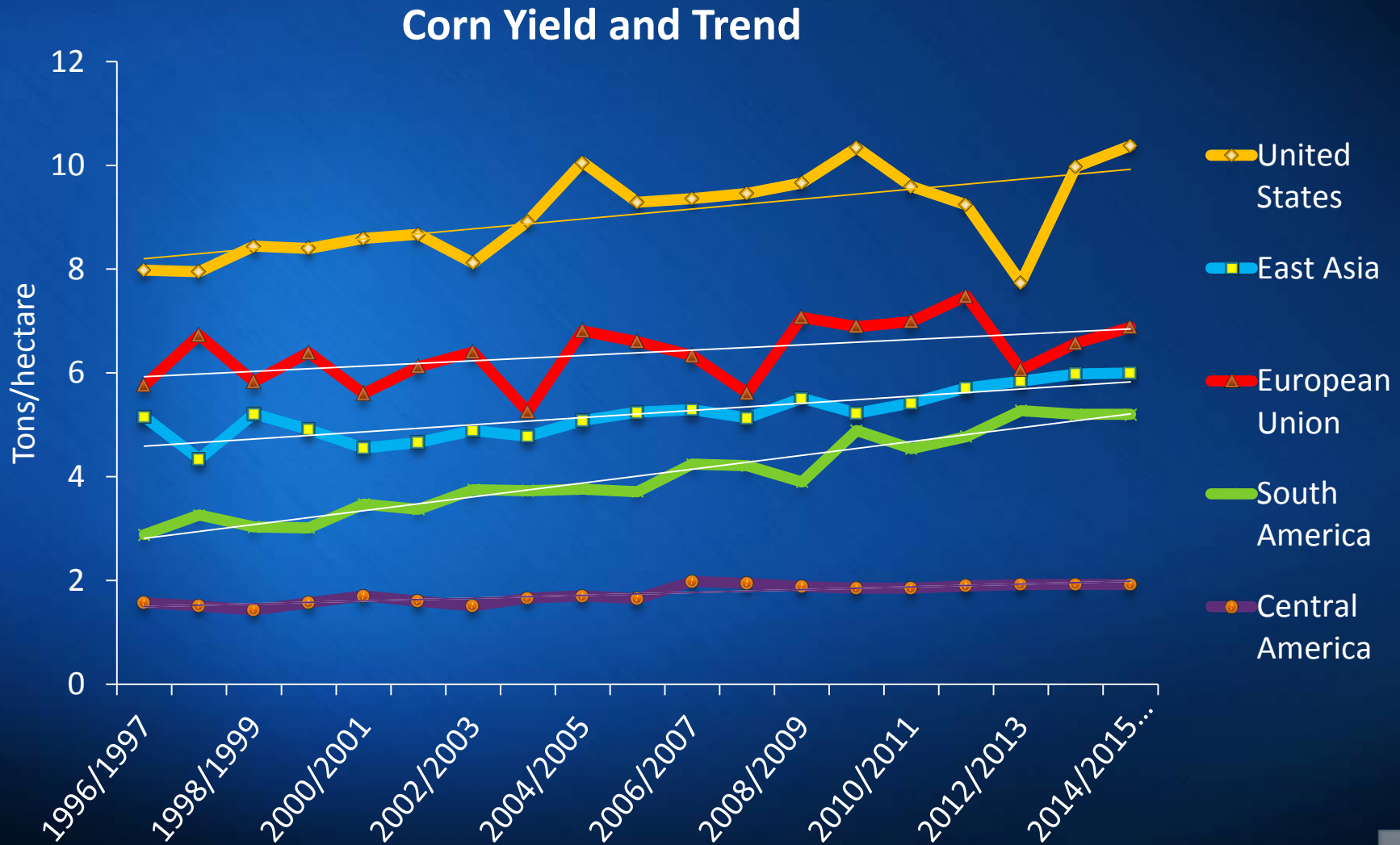
*A record 17.3 million farmers, in 28 countries, planted 170.3 million hectares (420 million acres) in 2012, a sustained increase of 6% or 10.3 million hectares (25 million acres) over 2011.*

Source: Clive James, 2012.



# Technology Is Key to Meeting Future Demand

*Big drop in U.S. yields in 2012/13 is due to worst drought in decades*





# What Could Go Wrong To Affect Global Outlook?

*While our current outlook is cautiously optimistic, a new emerging market crisis or a hard-landing in China could negatively affect the outlook*

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- USDA does not publish alternative baseline projections and only publishes once a year. The projections in this presentation were based on economic and policy assumptions developed in fall of 2013 and published February 2014.
- Current outlook assumes gradual improvement in global economy and stability in emerging markets. However, any unexpected economic “shocks” that reduces food demand in emerging markets would undermine our optimism.
- If a new crisis occurs and reduces food demand in emerging markets, it could:
  - Reduce the growth of the middle class in emerging markets
  - Further increase the value of the U.S. dollar (safe haven response)
  - Reduce global trade (including agricultural trade)
  - Reduce almost all dollar-based commodity prices
  - Reduce farm income



# Summary -- *The Bottom Line*

*Cautious optimism is the best way to characterize our outlook*

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- The long term price and profit outlook has been reduced from last year but still looks promising.
- Continued growth in global food, feed, (bio)fuel, and fiber demand should overcome the effects of a strengthening U.S. dollar to keep food and agricultural prices from returning to the pre-2006 levels.
- Much of this new demand will be centered in emerging markets and trade opportunities appear brightest in China, Southeast Asia, Middle East/North Africa, and Latin America.
- However, the long term outlook for profitability has been reduced from last year. With the outlook for crop prices reduced, both the total profitability of agriculture and operating margins will come under pressure. If so, this could affect new investment into agriculture (land and new technologies).
- Our cautious optimism is based on no unexpected surprises in the global economy. Should emerging market economies stumble, it could undermine our price and profit outlook.



Thank You!