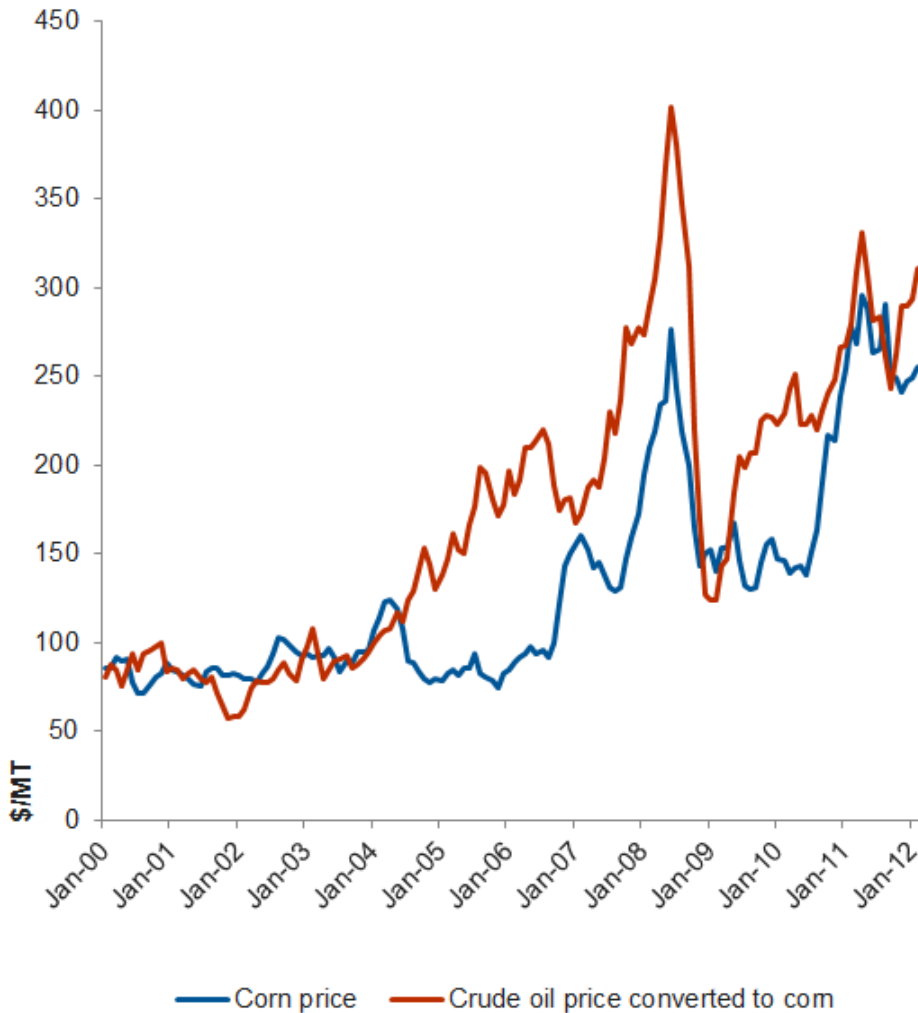


# Growth in Demand and Trade

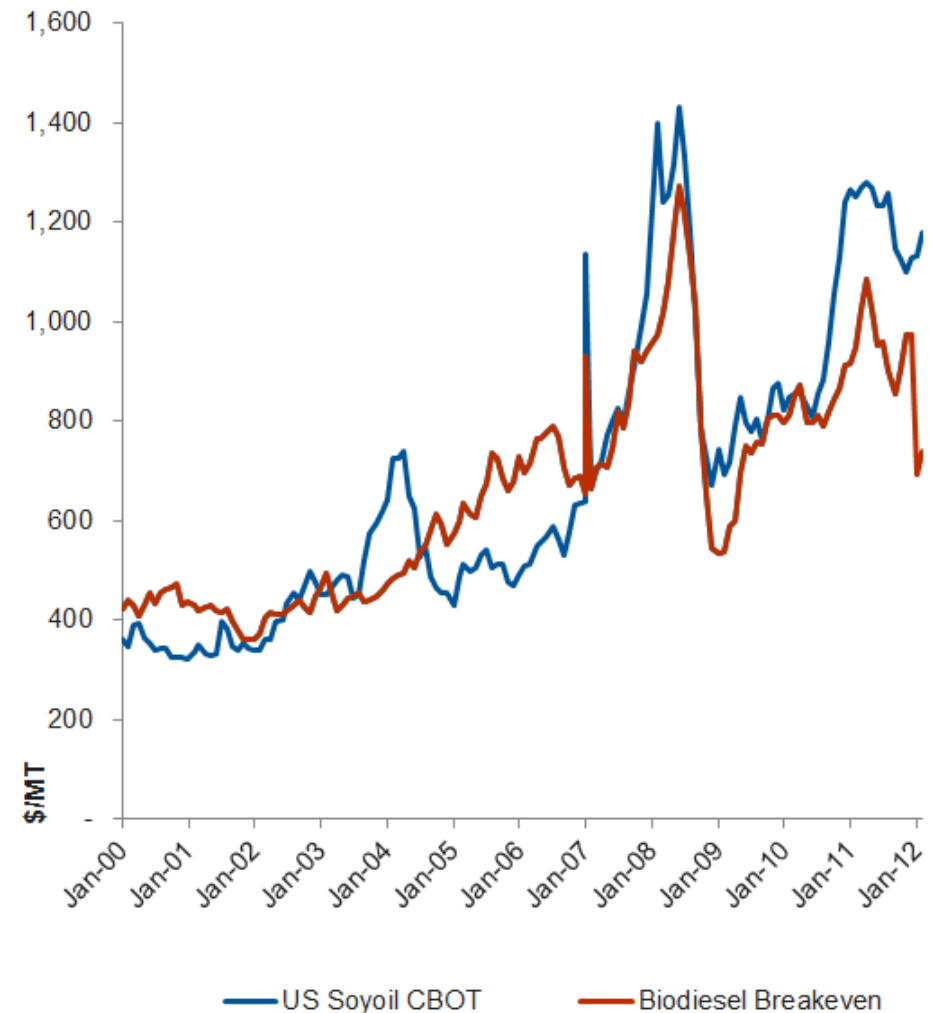


# Energy and Ag Products Remain Closely Connected

## Corn and Energy Prices

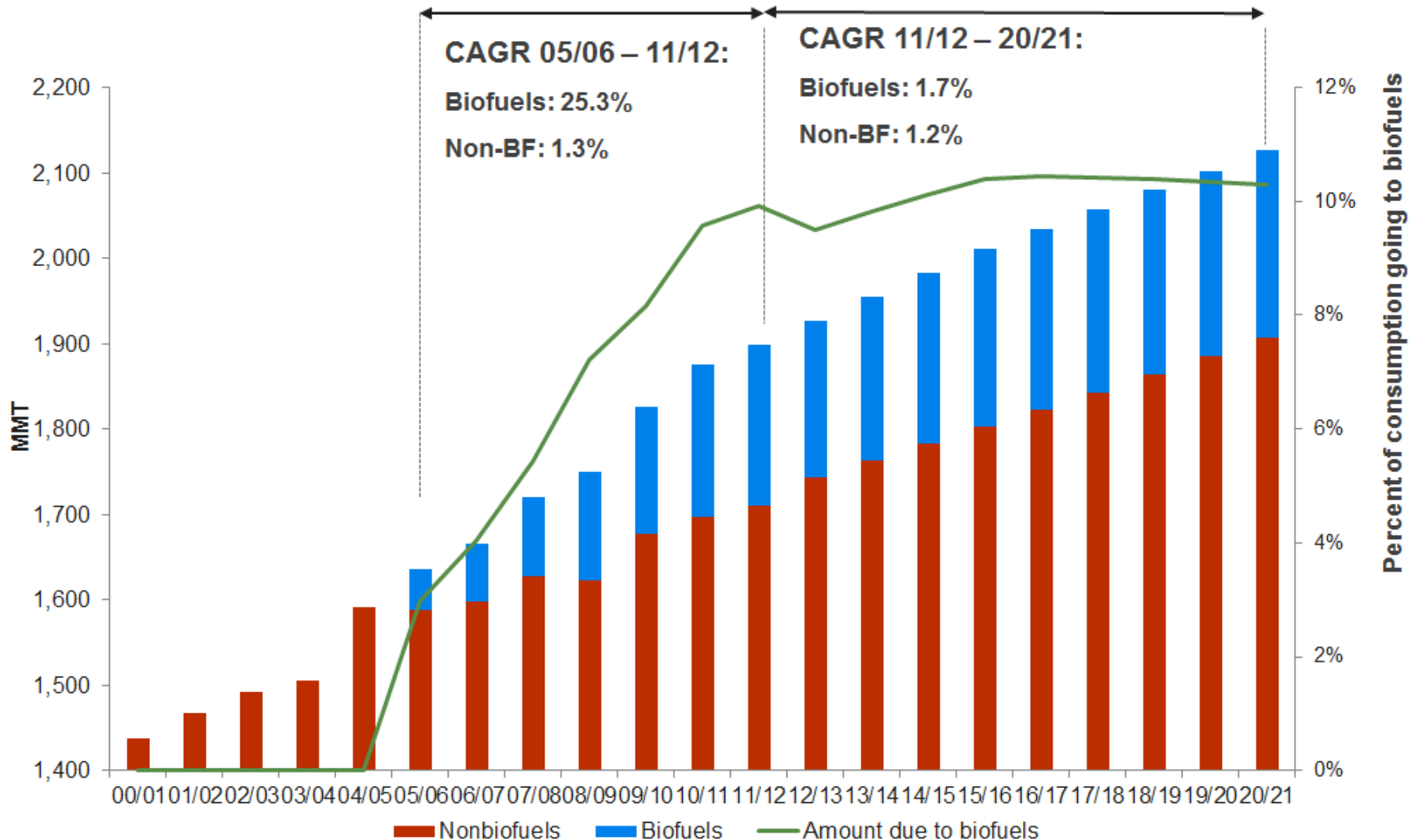


## Veg-oil and Energy Prices



# Strong Demand Growth Led by Biofuels

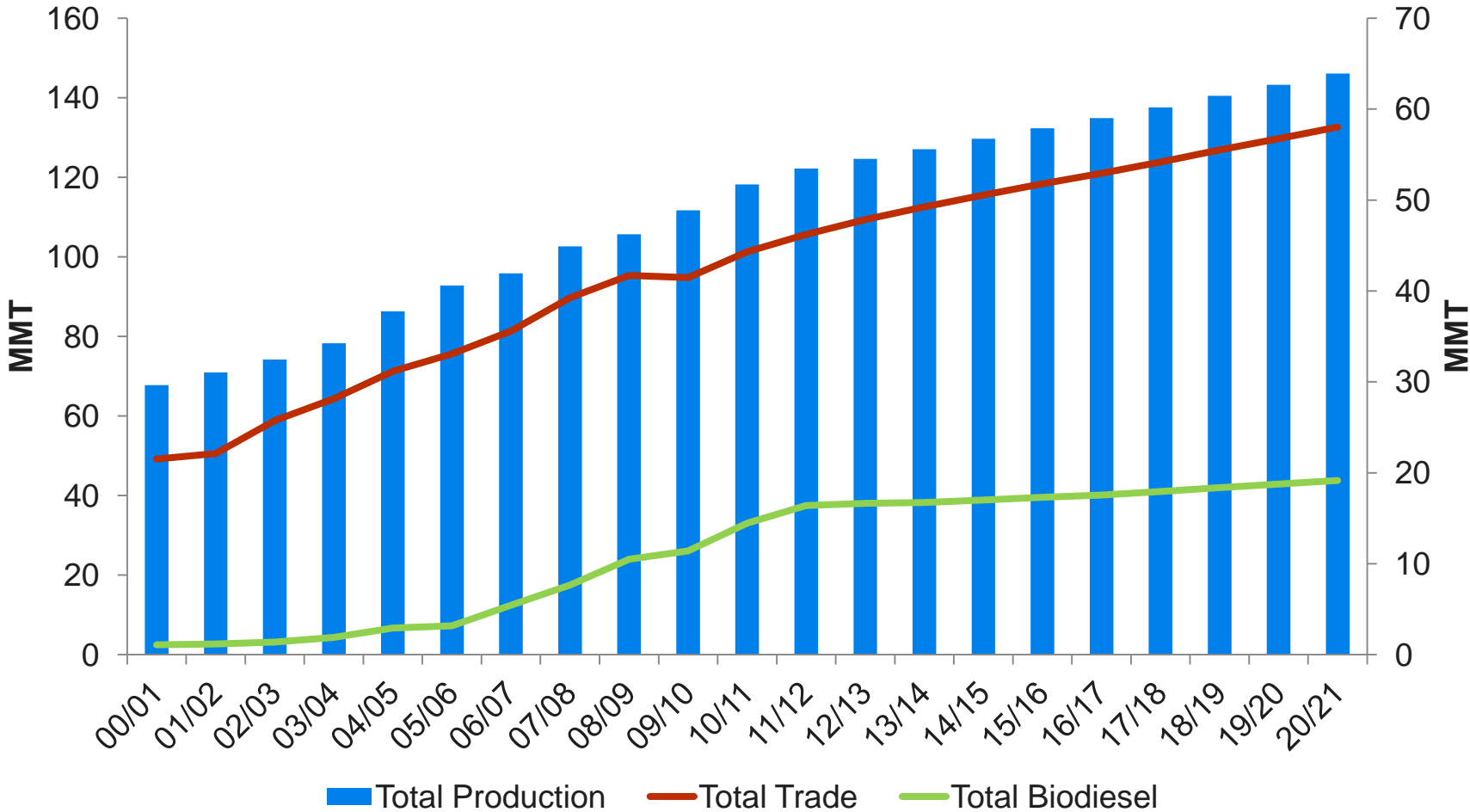
Corn, Wheat, Soy & Products, Canola & Products, Palm



Source: Food and Agriculture Policy Research Institute, Iowa State University.

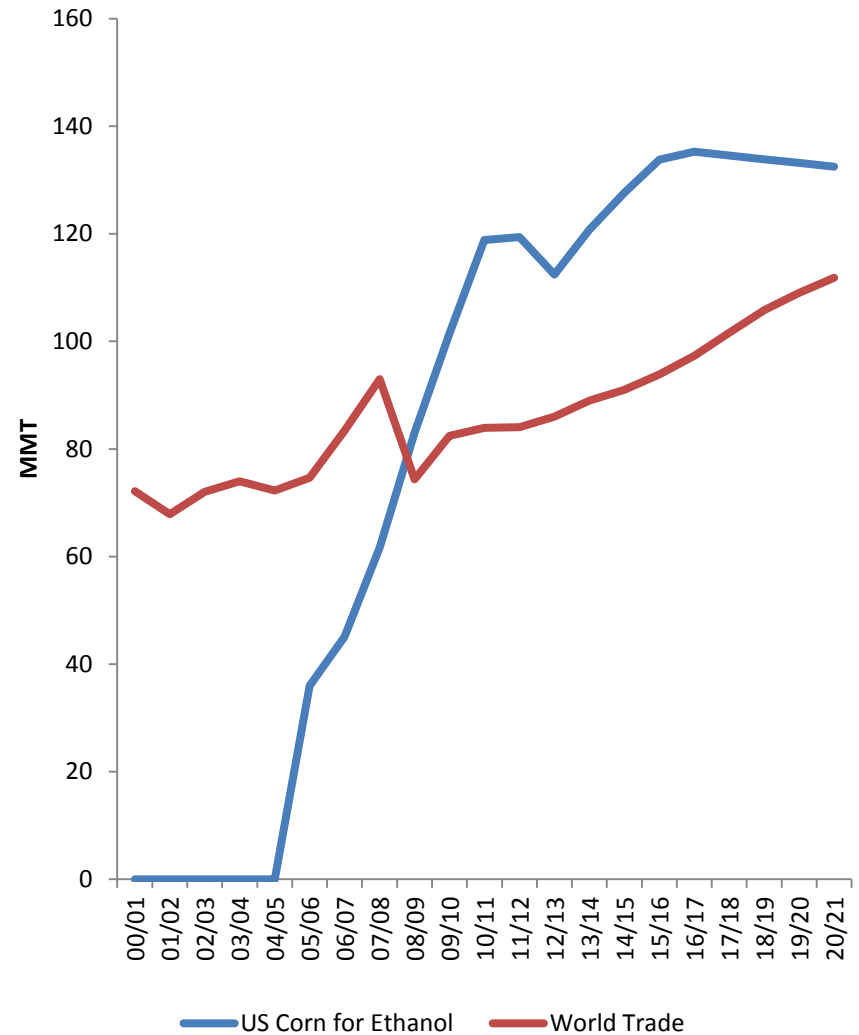
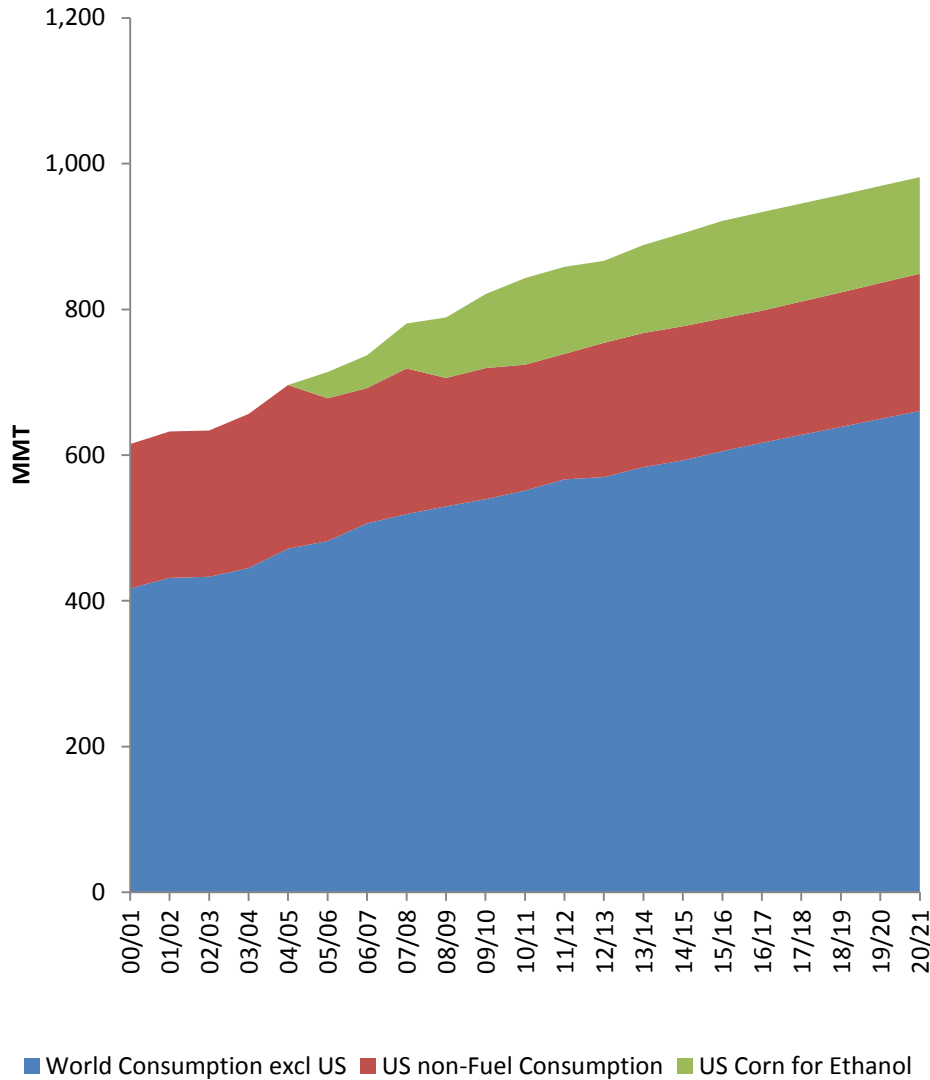
# Bio-diesel demand is 40% of world trade in veg Oils

Soy, Canola, Palm Oils



Source: Food and Agriculture Policy Research Institute, Iowa State University.

# US Corn for Ethanol Use Surpasses Global Corn Trade

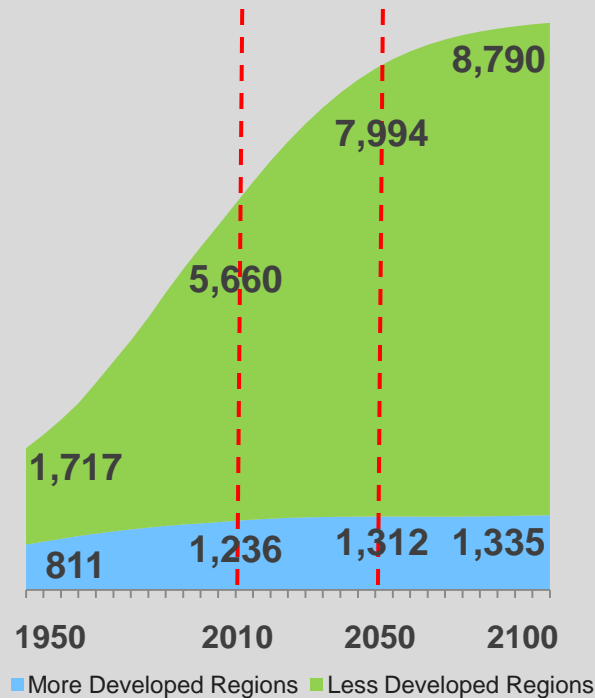


Source: Food and Agriculture Policy Research Institute, Iowa State University.

# Future Growth In Demand Is Mostly Driven By Food Needs

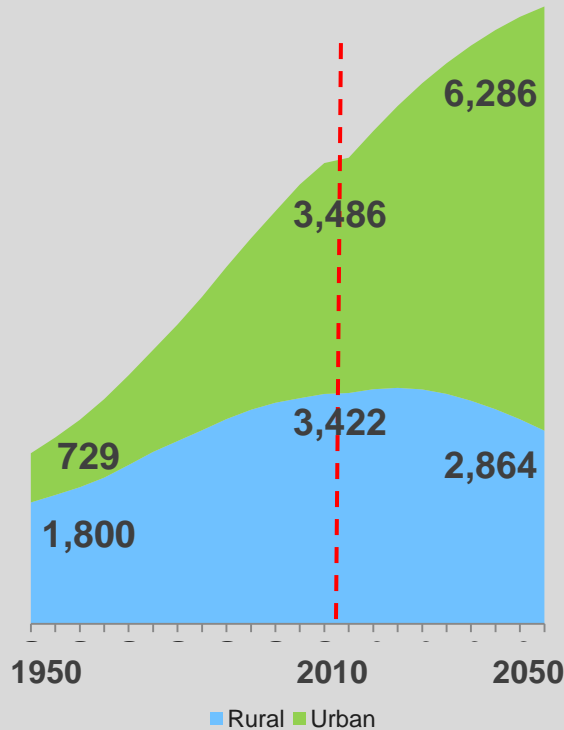
Population continues to grow fast in developing countries

Global Population by Type of Economy (M)



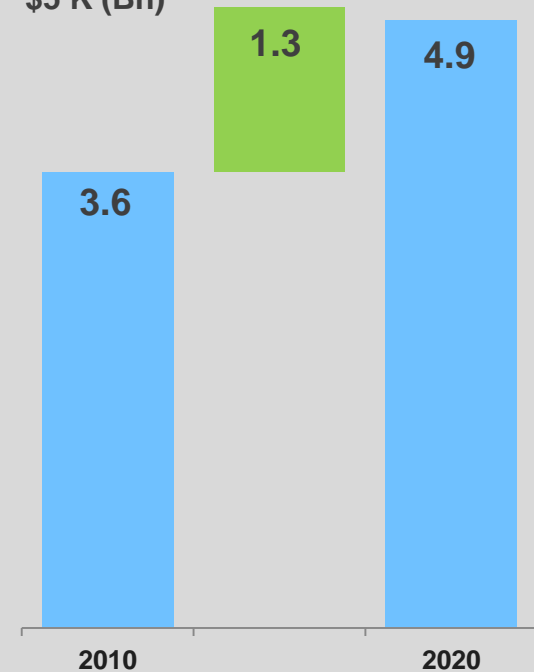
Urbanization continues to increase

Global Population by Type of Community (M)



Global middle class is growing rapidly

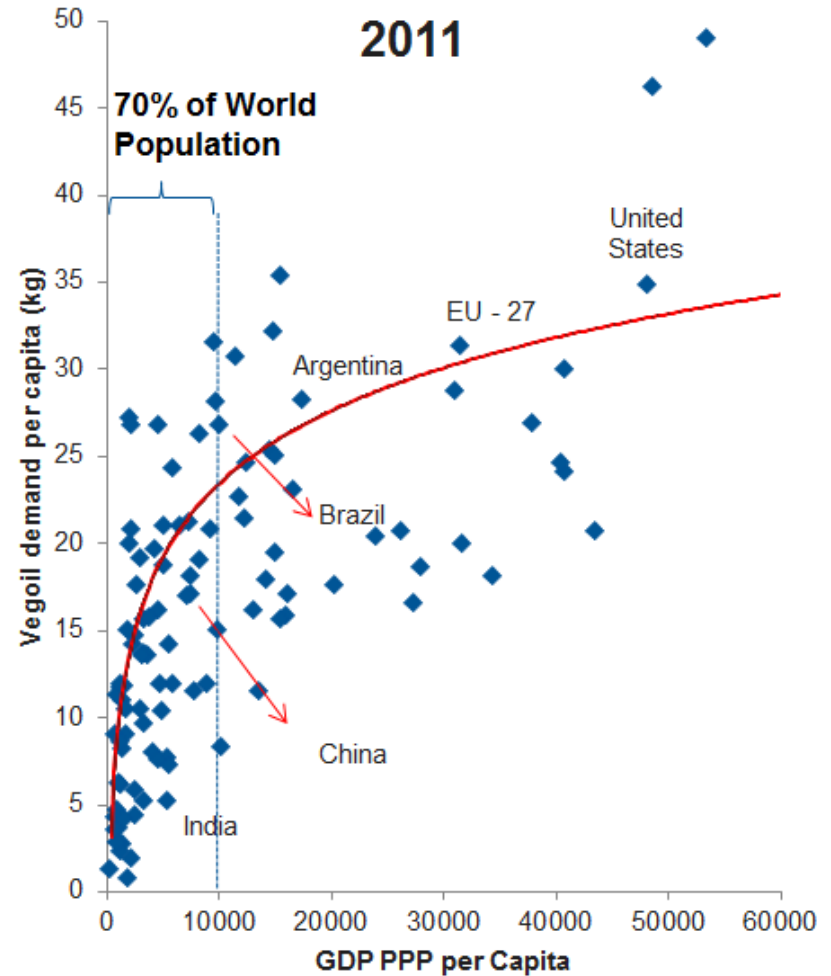
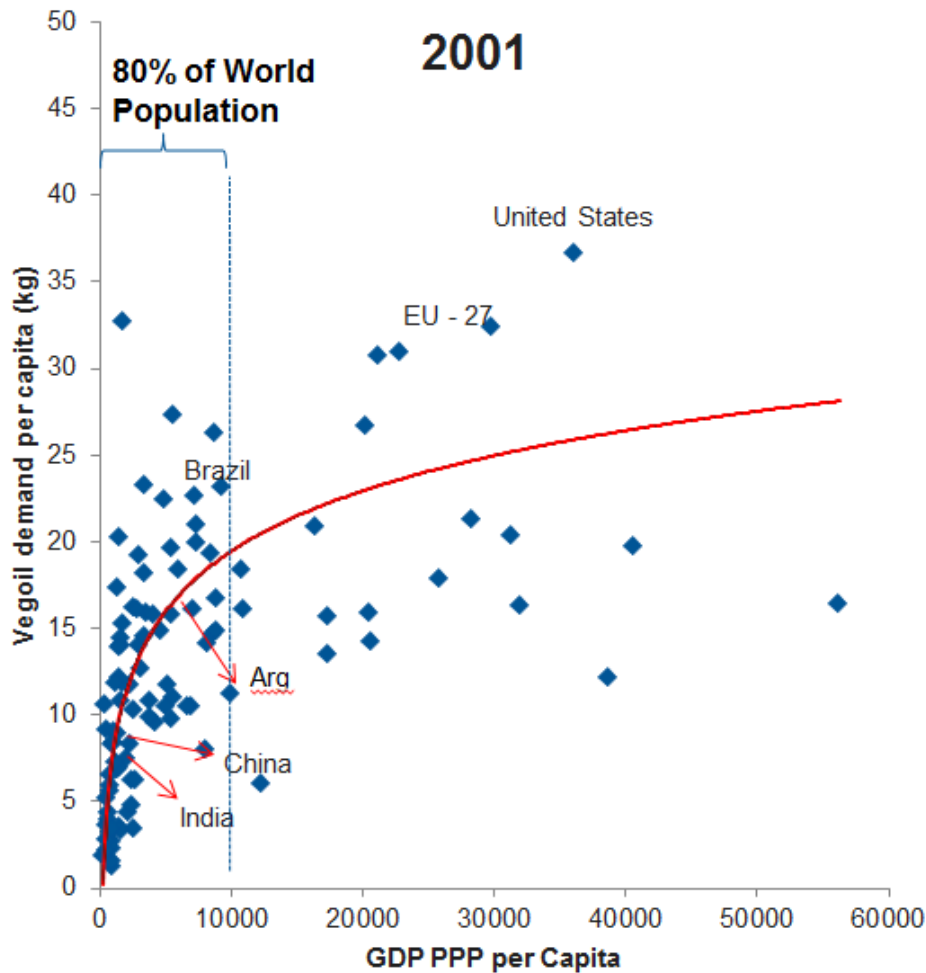
World Population with Household Income exceeding \$5 K (Bn)



Source: Population data from UN State of the World Population 2011; Middle class data from Bain & Co

# Income & Vegetable Oil Consumption Rise Together

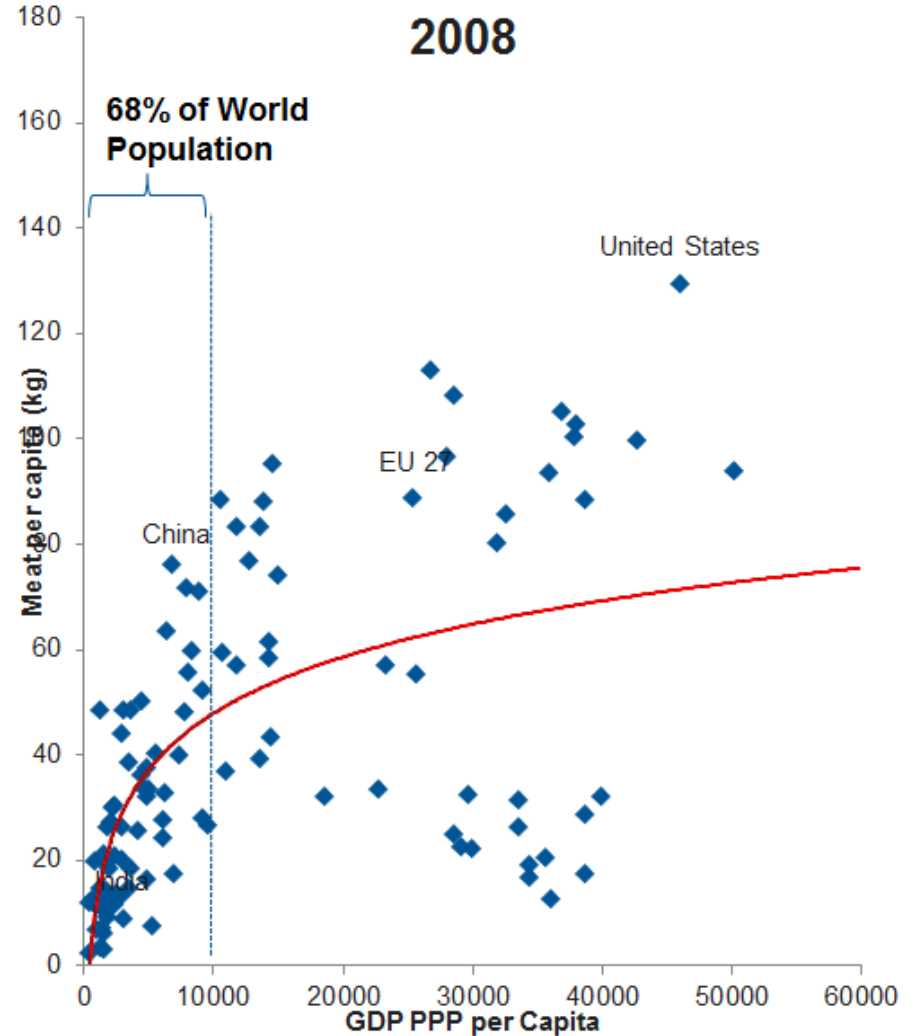
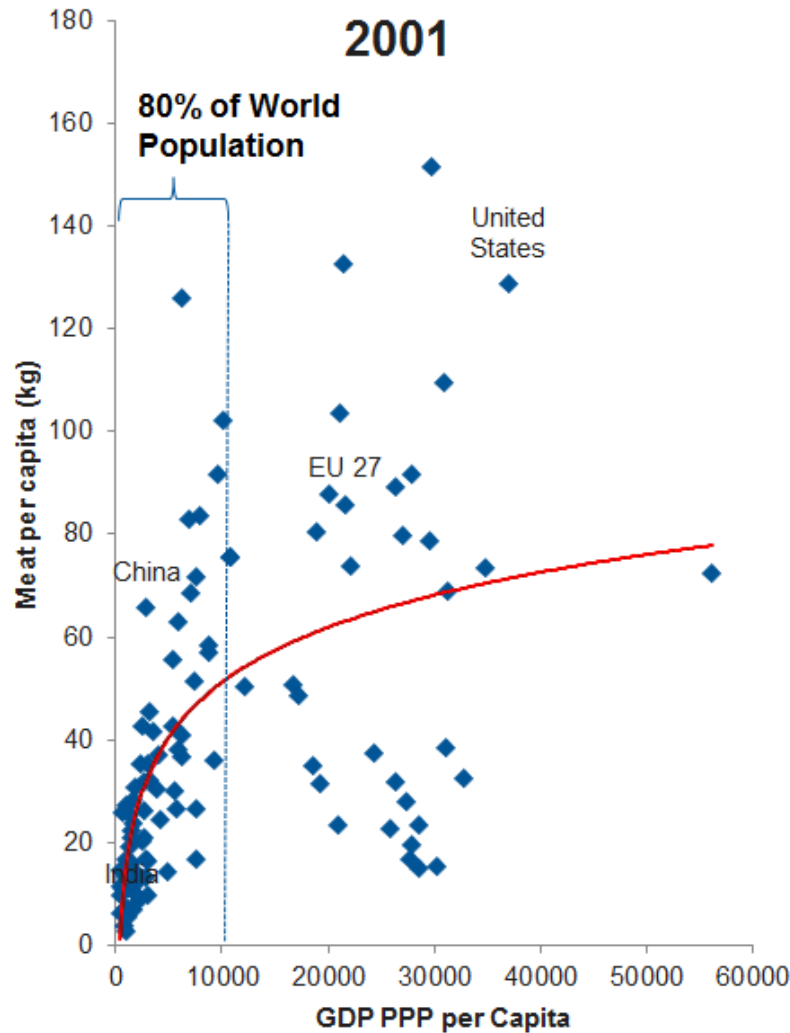
Vegoil Income Elasticity PC - Relationship between per capita food veg-oil consumption and income



Source: IMF, Oil World

# Same for Animal Protein

## Relationship between per capita animal protein consumption and income

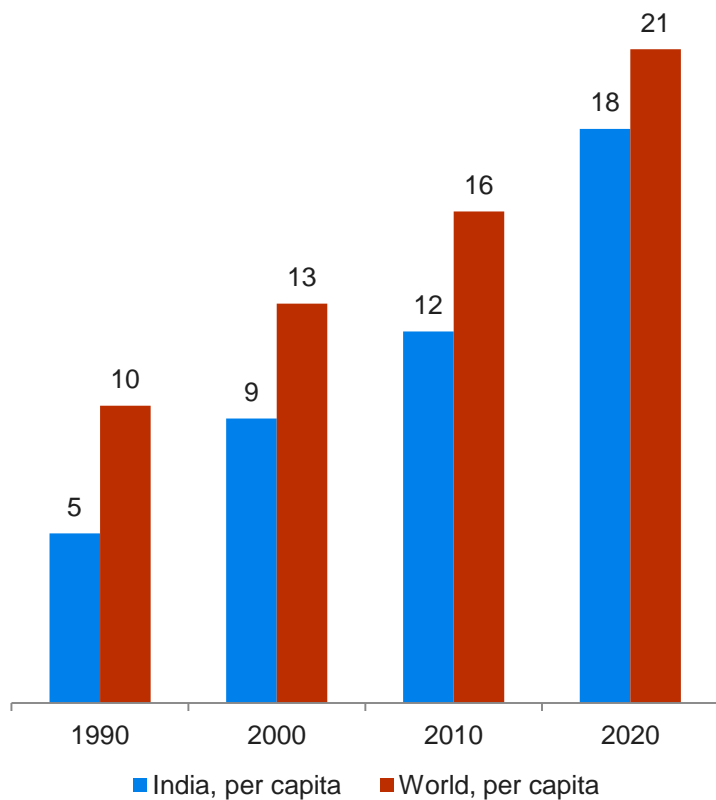


Source: IMF, Oil World

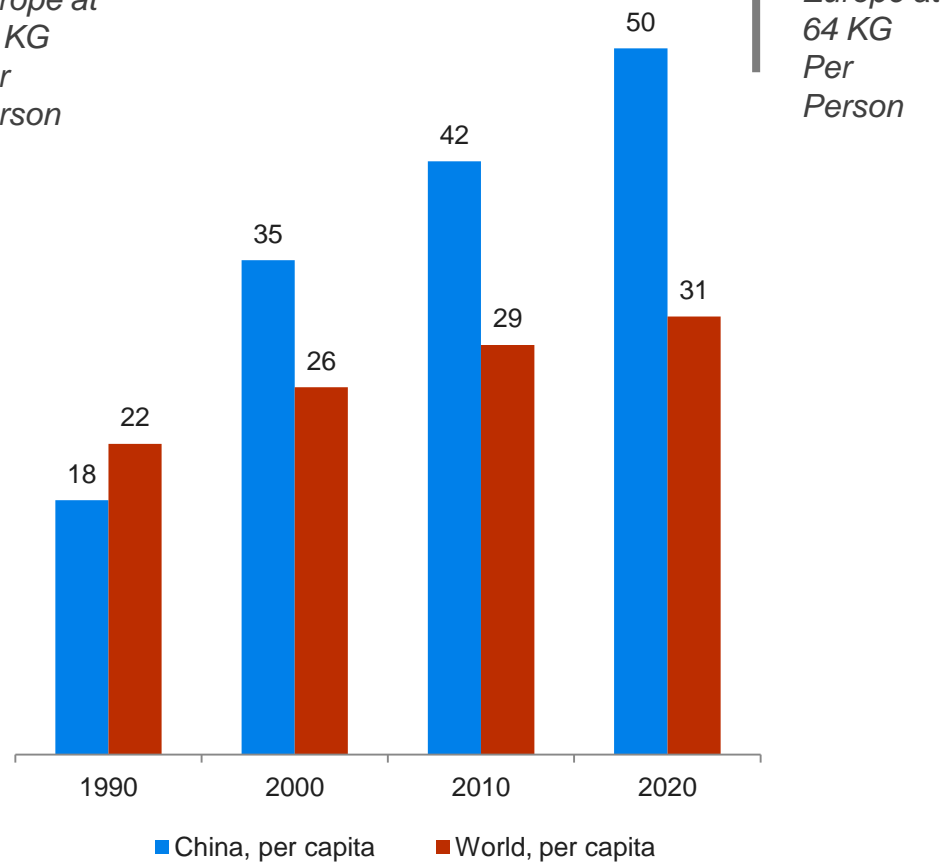


# Which Means the Consumption Gap Narrows

## Vegoil Consumption (kg/person)



## Meat Consumption (kg/person)



Source: USDA & UN Population Division, USDA, LMC, Private Estimate

# Demand Growth Drives Large Increase in Trade

Corn, Wheat, Soybeans & Products, Canola & Products, Palm

CAGR 2005-2010:

CAGR 2010-2015:

CAGR 2010-2020:

Trade: 4.0%

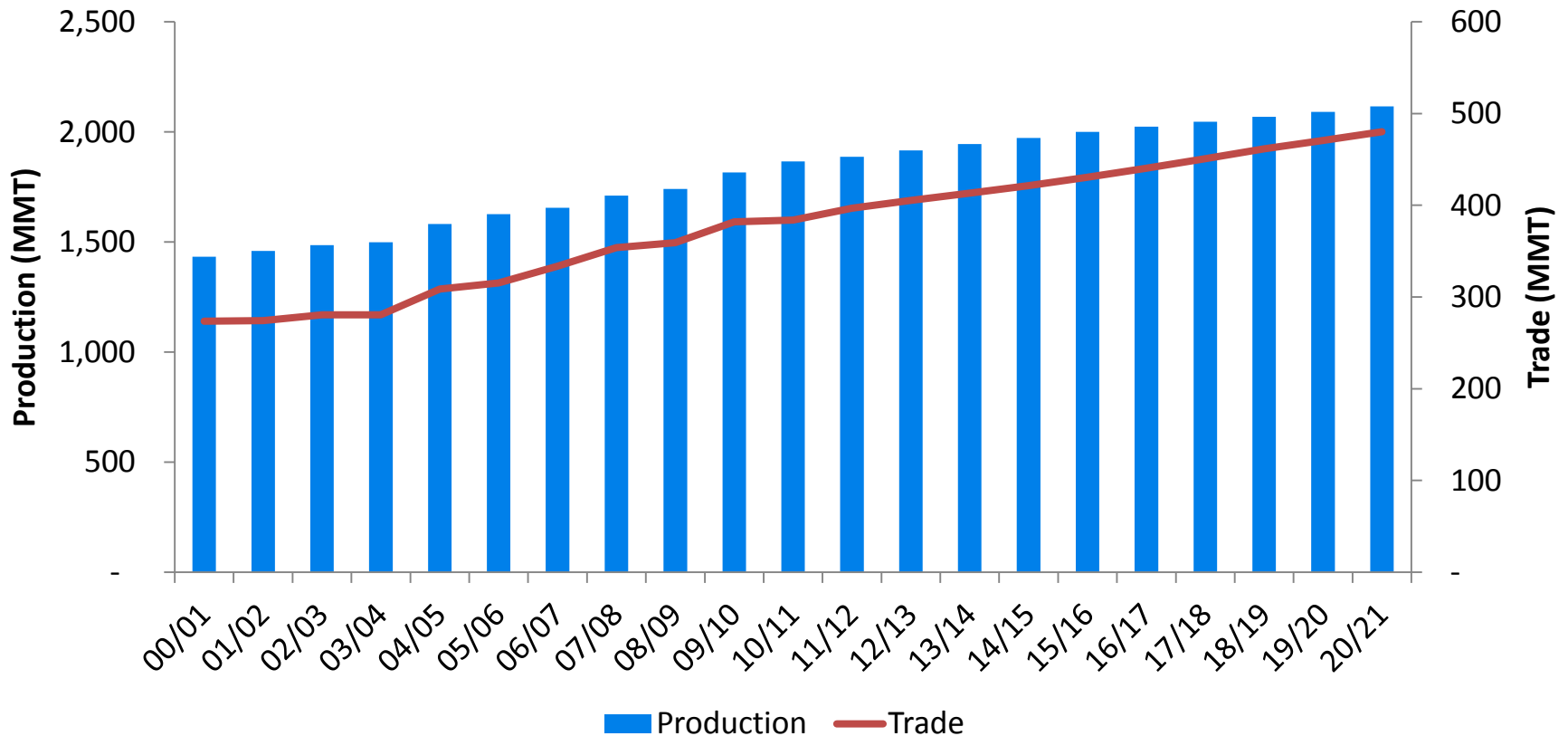
Trade: 2.3%

Trade: 2.3%

Production: 2.7%

Production: 1.4%

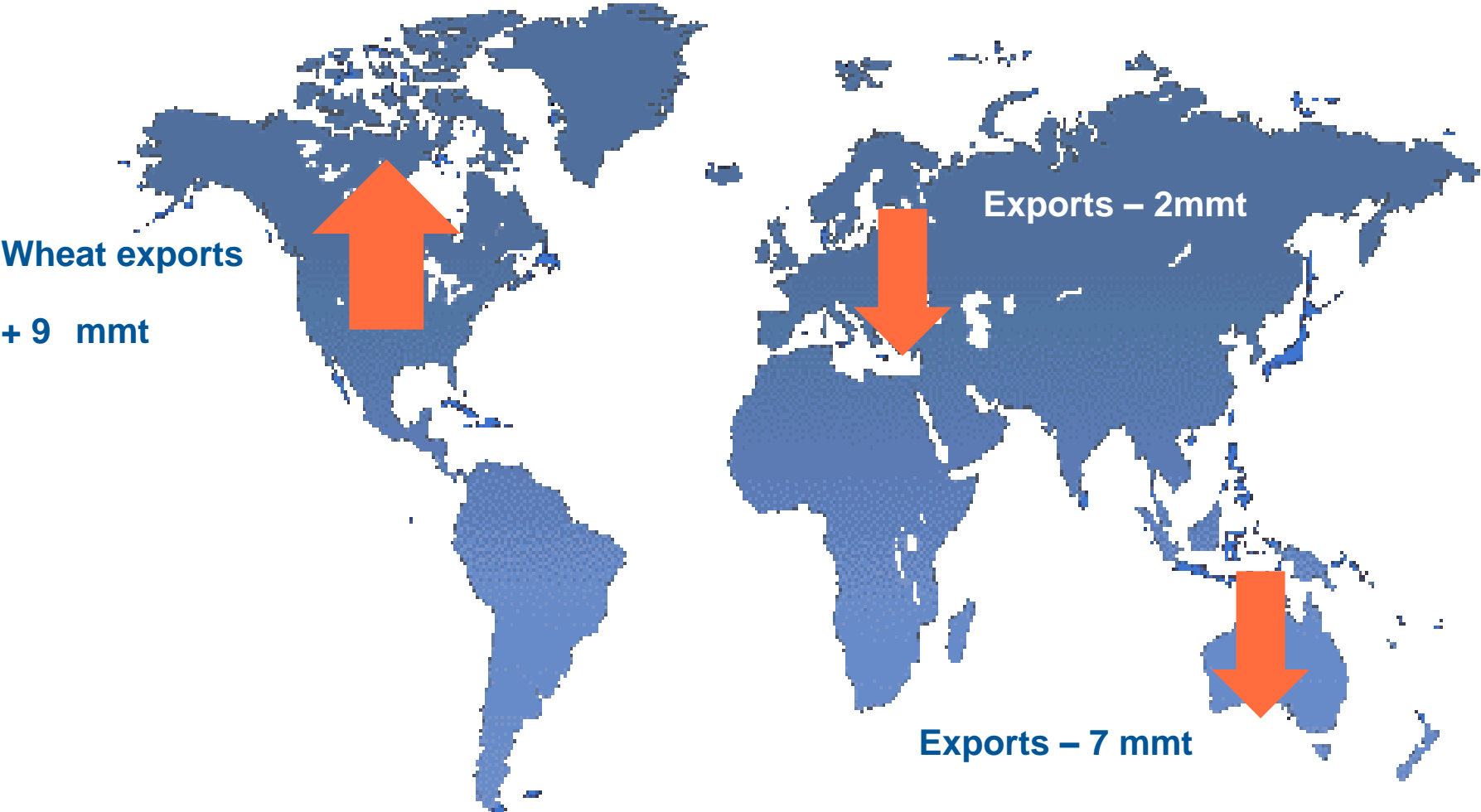
Production: 1.3%



Source: Food and Agriculture Policy Research Institute, Iowa State University.

# As Trade Grows, Shifts in Flow Become More Dynamic

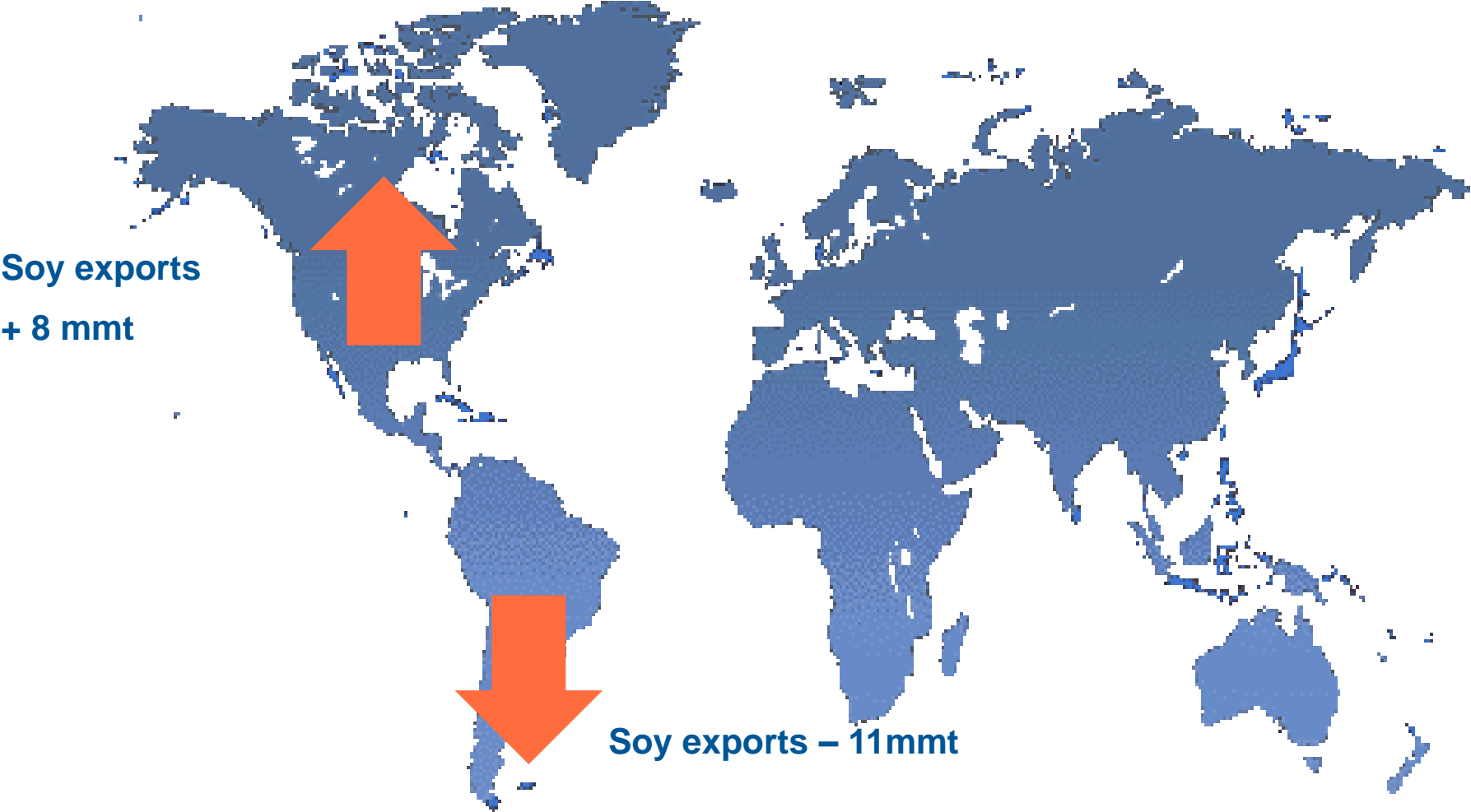
## 2007/2008 Australian and Black Sea Droughts



Source: Bunge.

# As Trade Grows, Shifts in Flow Become More Dynamic

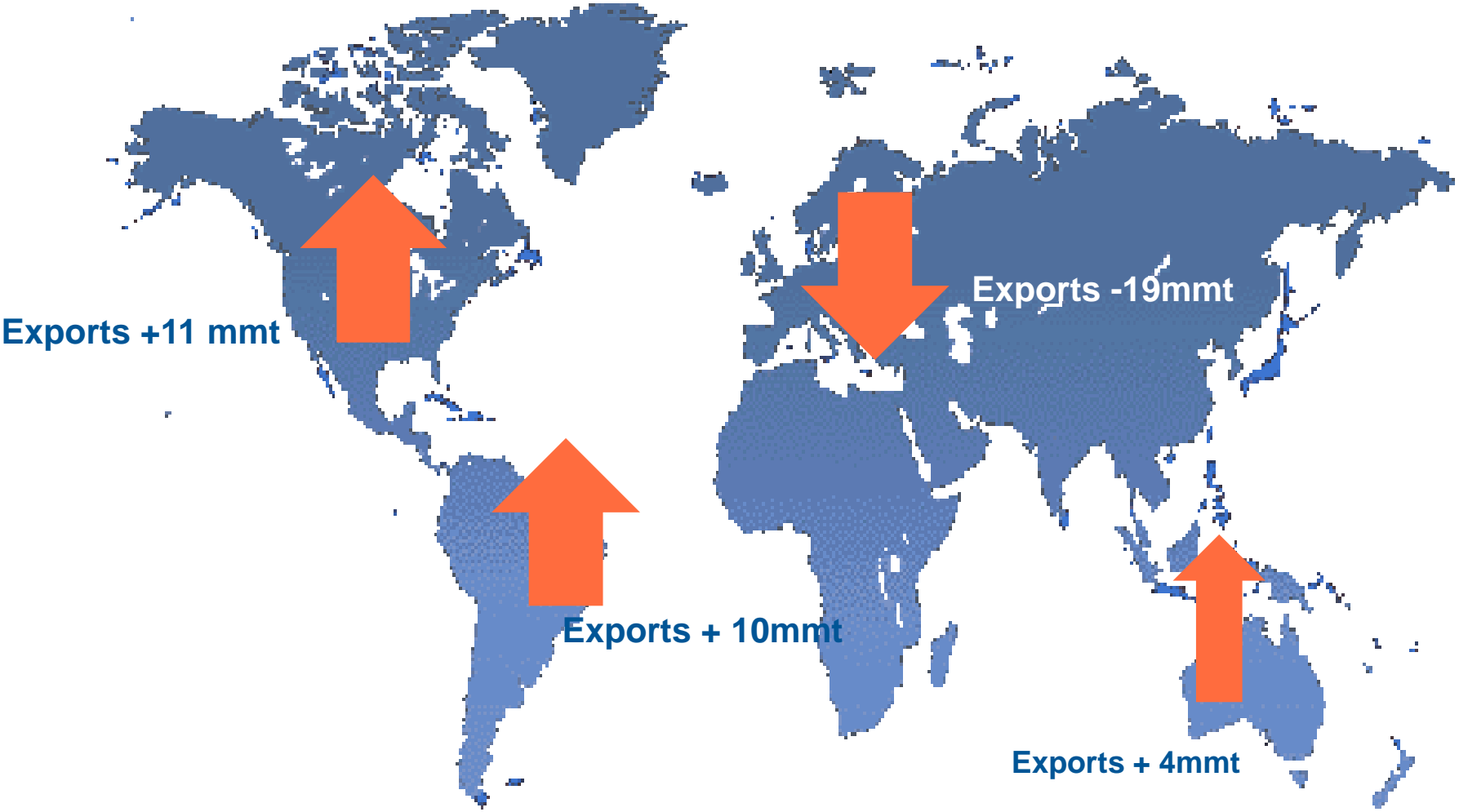
## 2009 Argentina Soybean Drought



Source: Bunge.

# As Trade Grows, Shifts in Flow Become More Dynamic

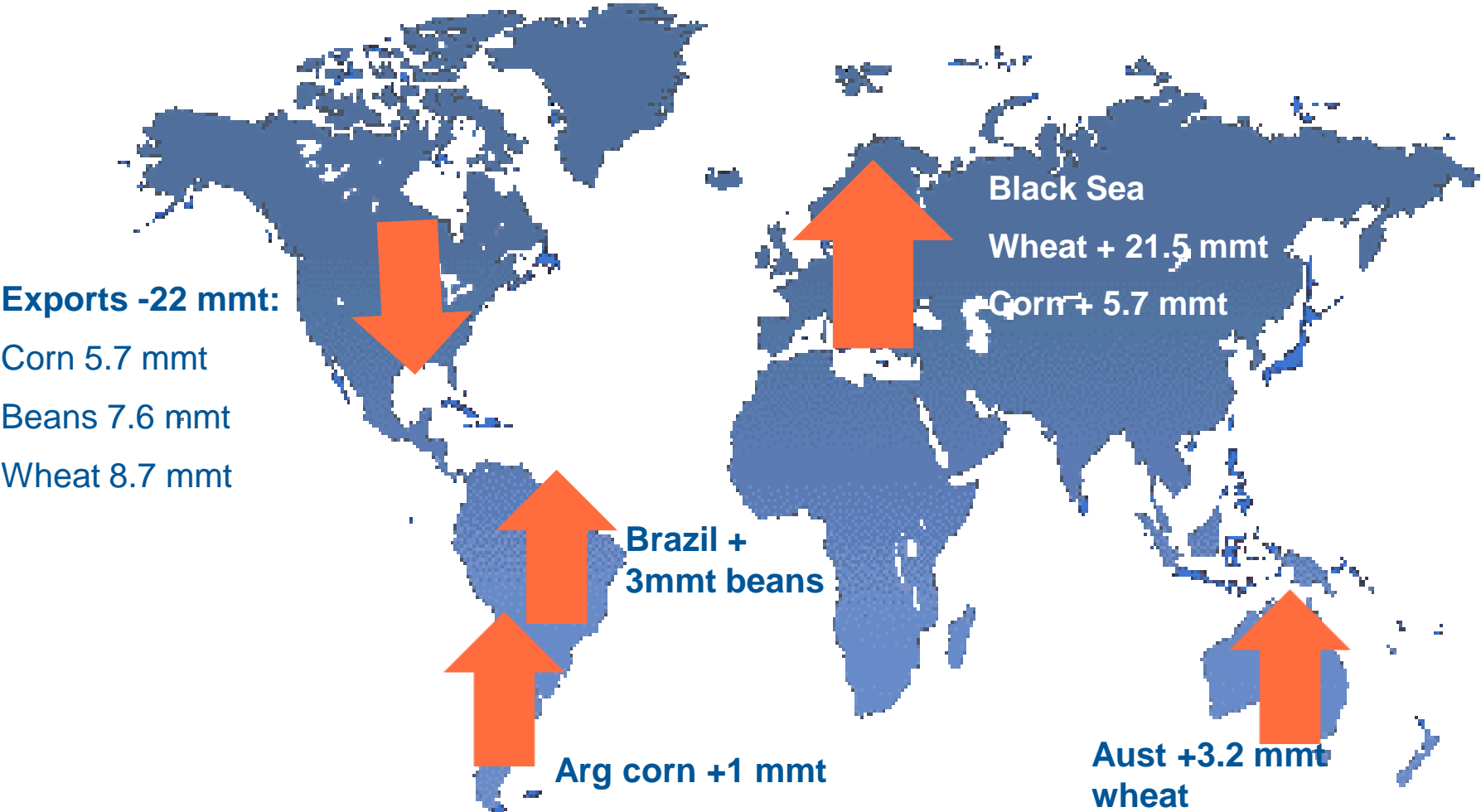
## 2010 Black Sea and EU Drought



Source: Bunge.

# As Trade Grows, Shifts in Flow Become More Dynamic

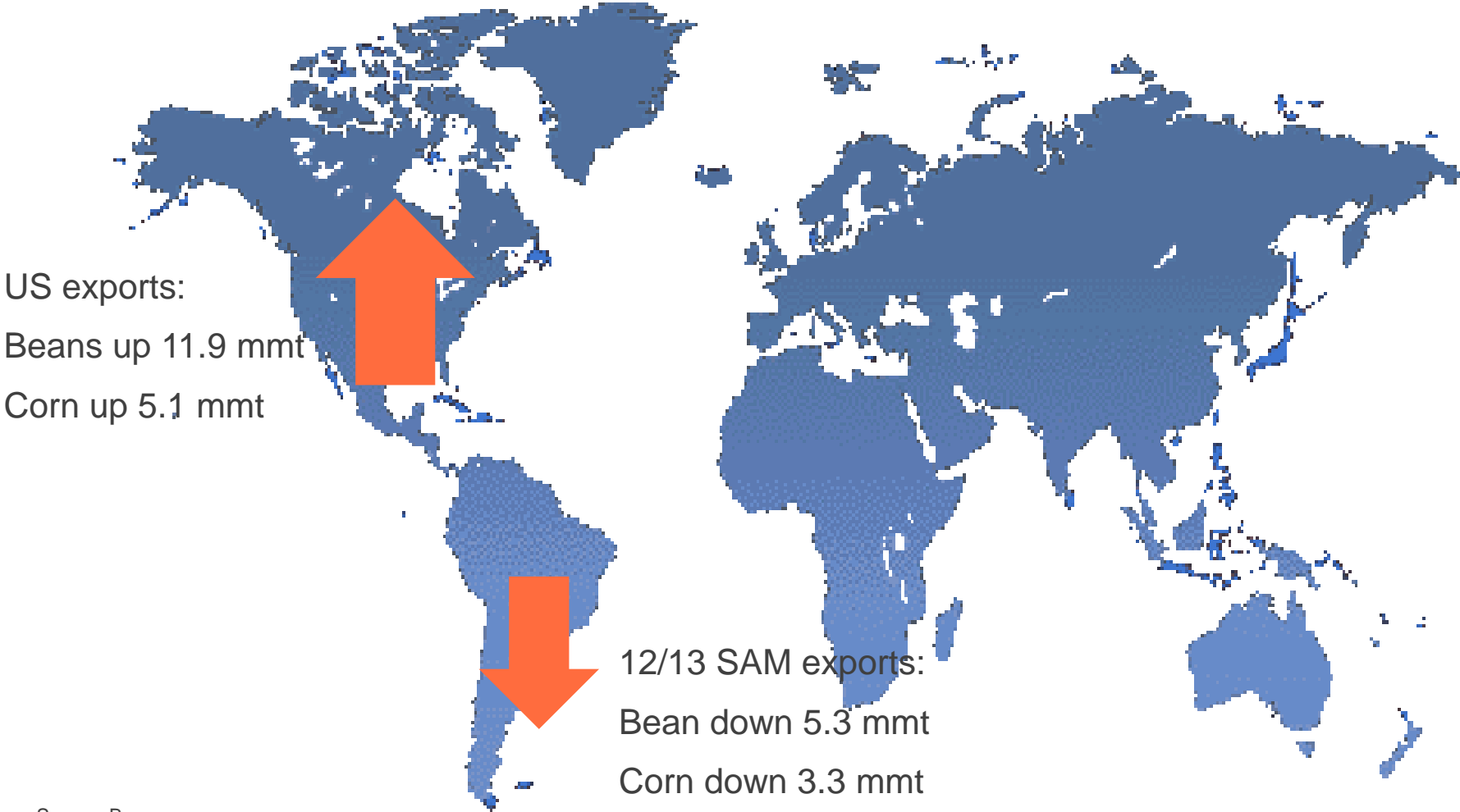
## 2011 US Corn Drought and Excellent Global Crops



Source: Bunge.

# As Trade Grows, Shifts in Flow Become More Dynamic

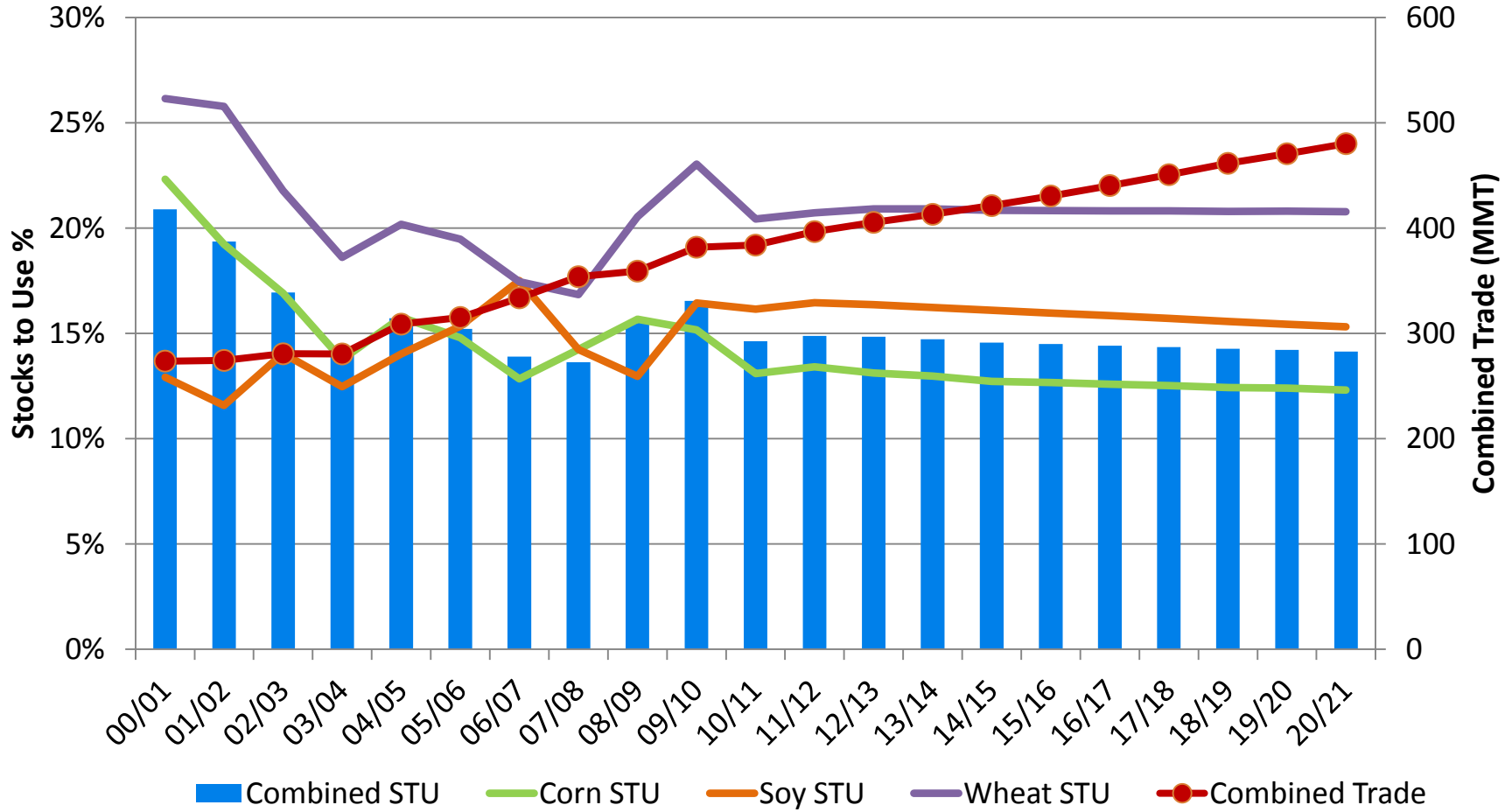
## 2012 SAM Drought



Source: Bunge.

# World Stocks-to-Use Ratios Remain Historically Tight

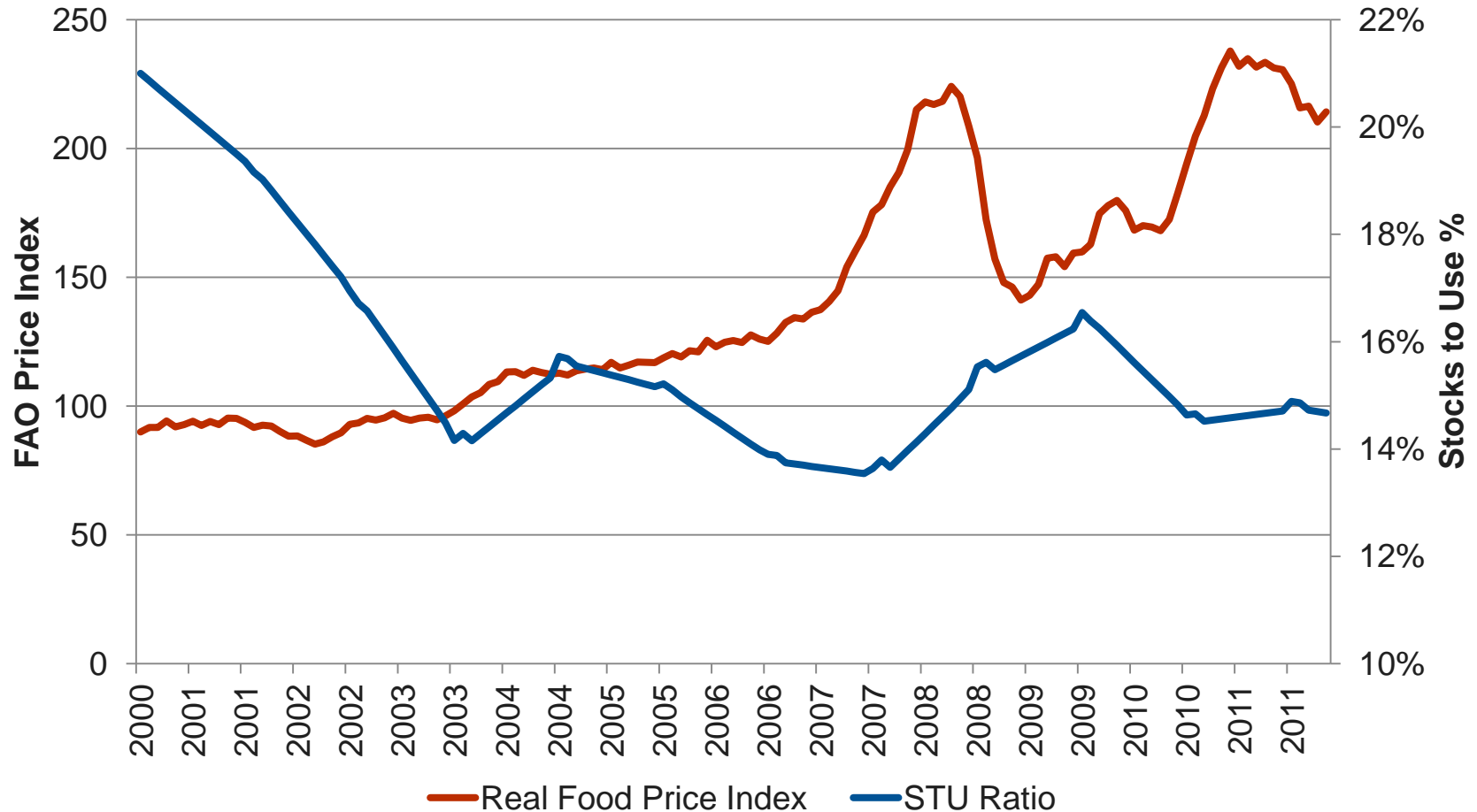
Corn, Wheat, Soybeans & Products, Canola & Products, Palm



Source: Food and Agriculture Policy Research Institute, Iowa State University.



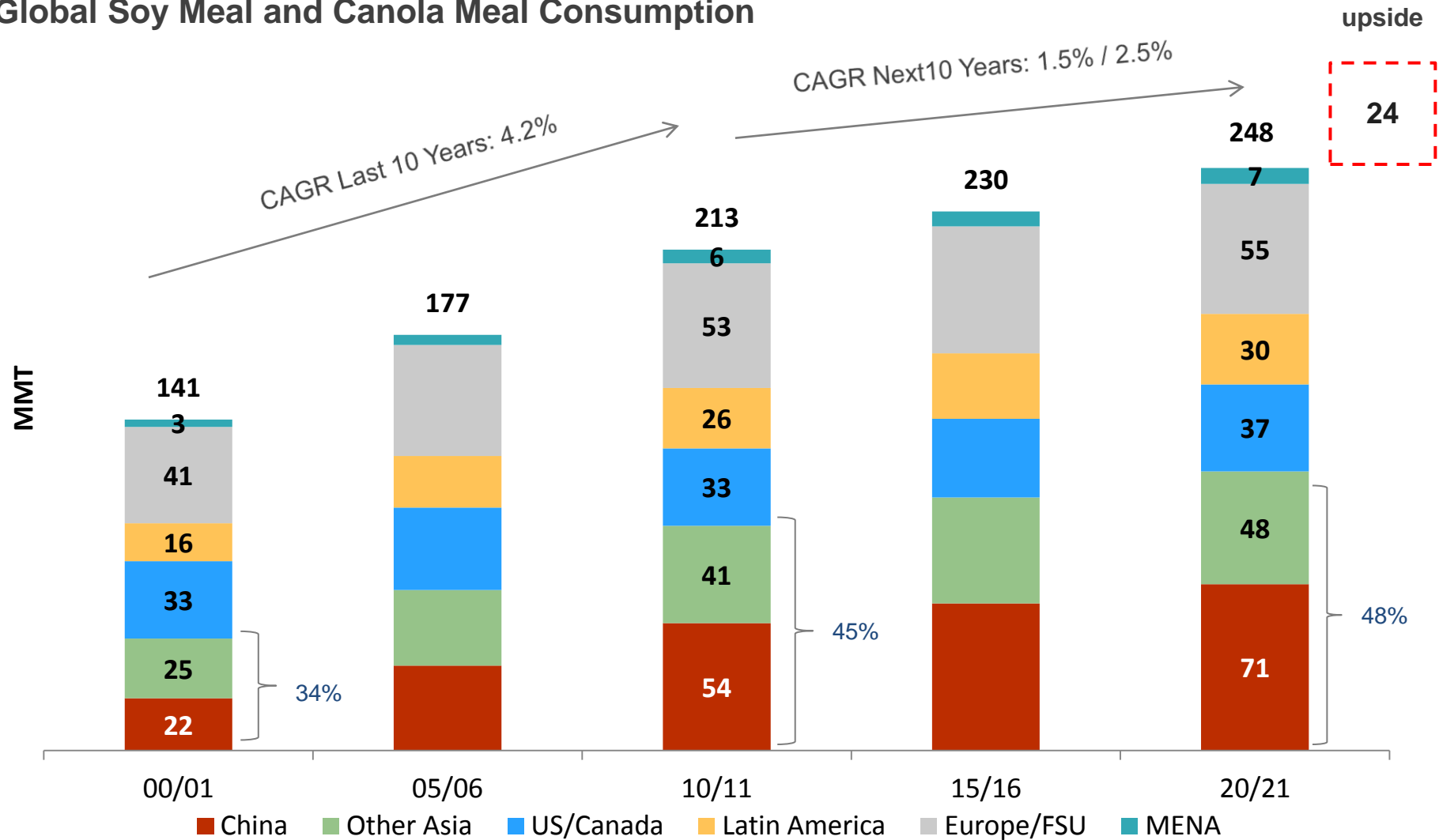
# Food Prices Have Become Increasingly Volatile as Stocks-to-Use Ratios Have Tightened



Source: UN (FAO), Food and Agriculture Policy Research Institute, Iowa State University.

# Proteins and Vegoils Lead Global Consumption Growth

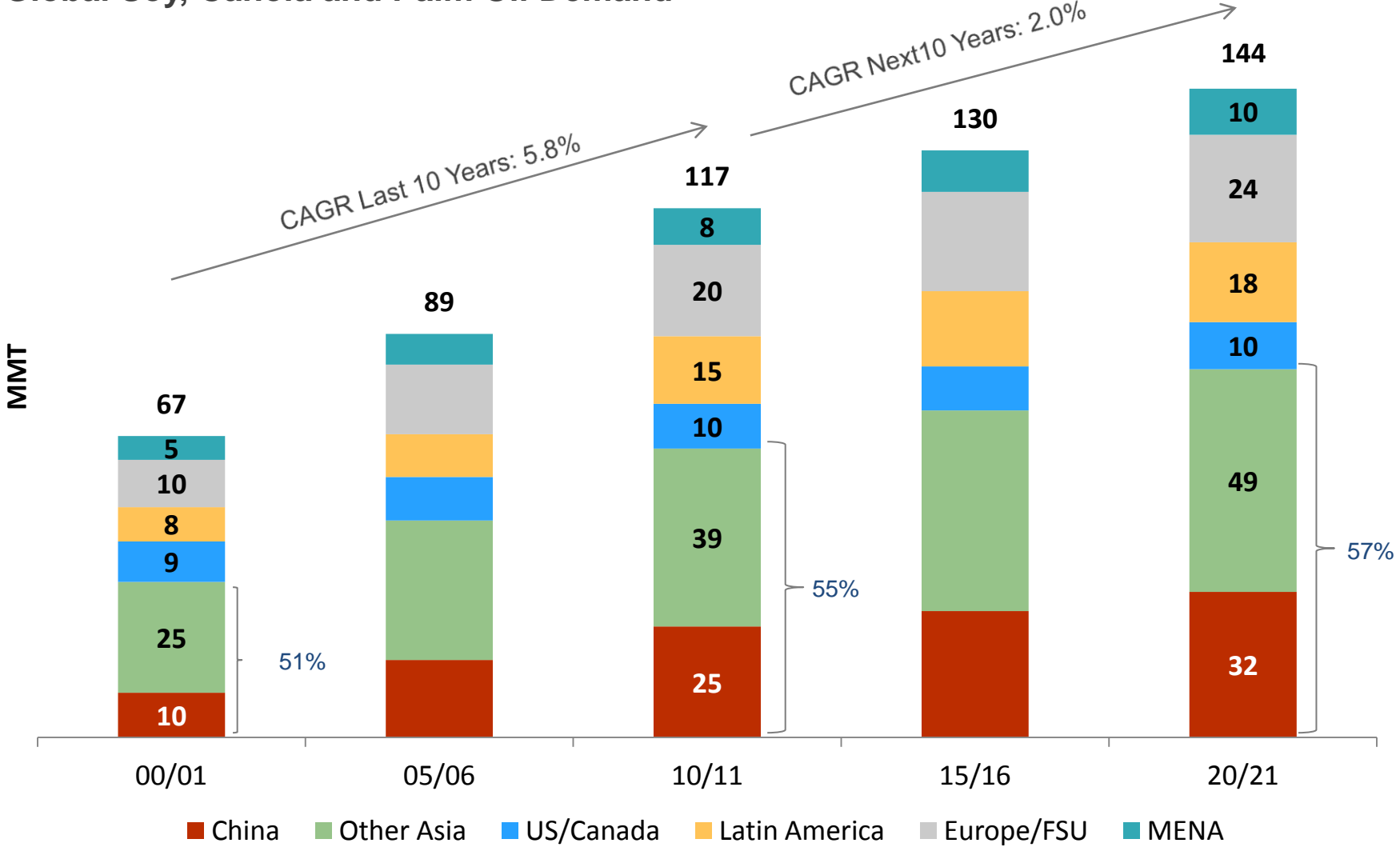
## Global Soy Meal and Canola Meal Consumption



Source: Food and Agriculture Policy Research Institute, Iowa State University, LMC, Private Estimate.

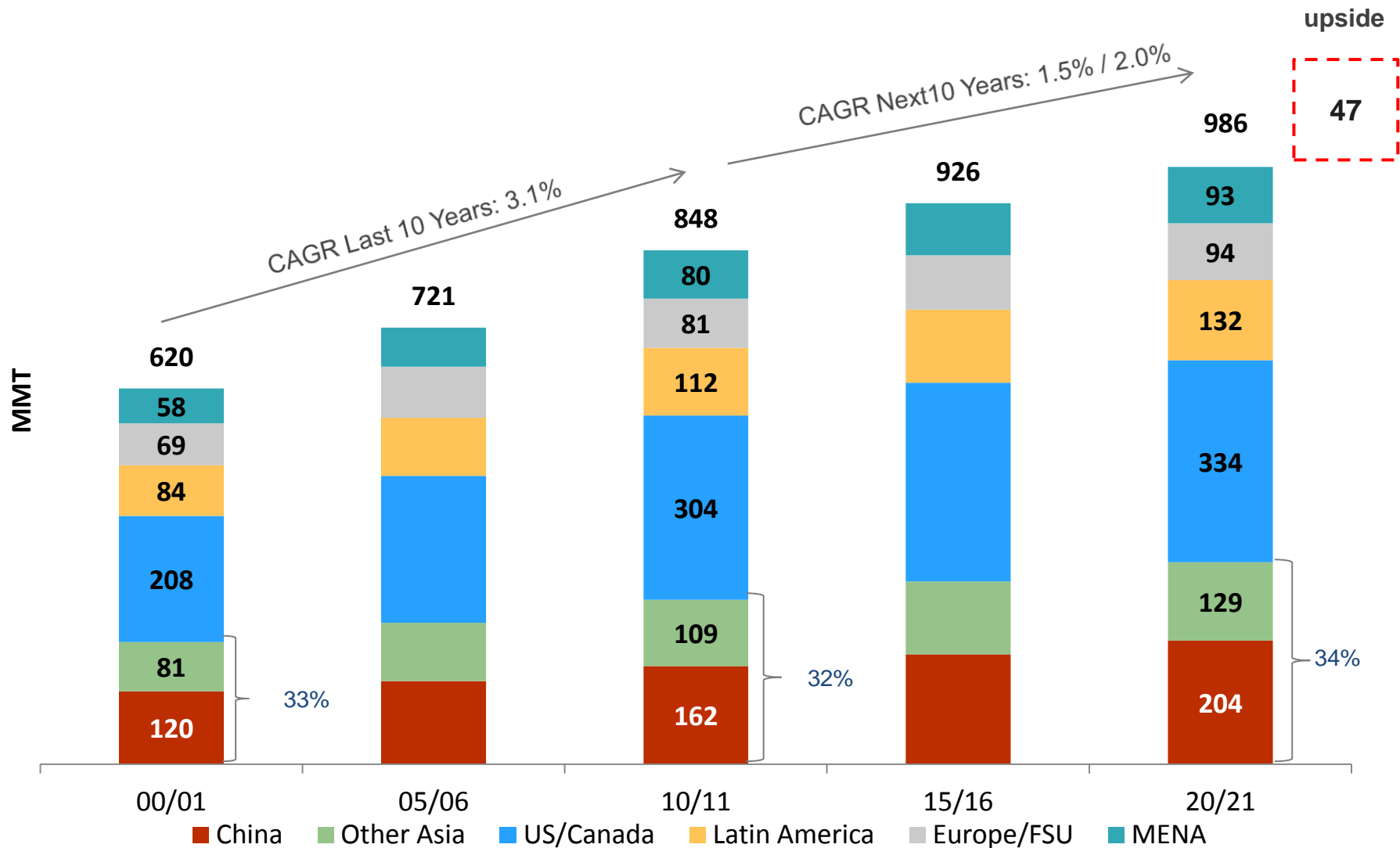
# Proteins and Vegoils Lead Global Consumption Growth

## Global Soy, Canola and Palm Oil Demand



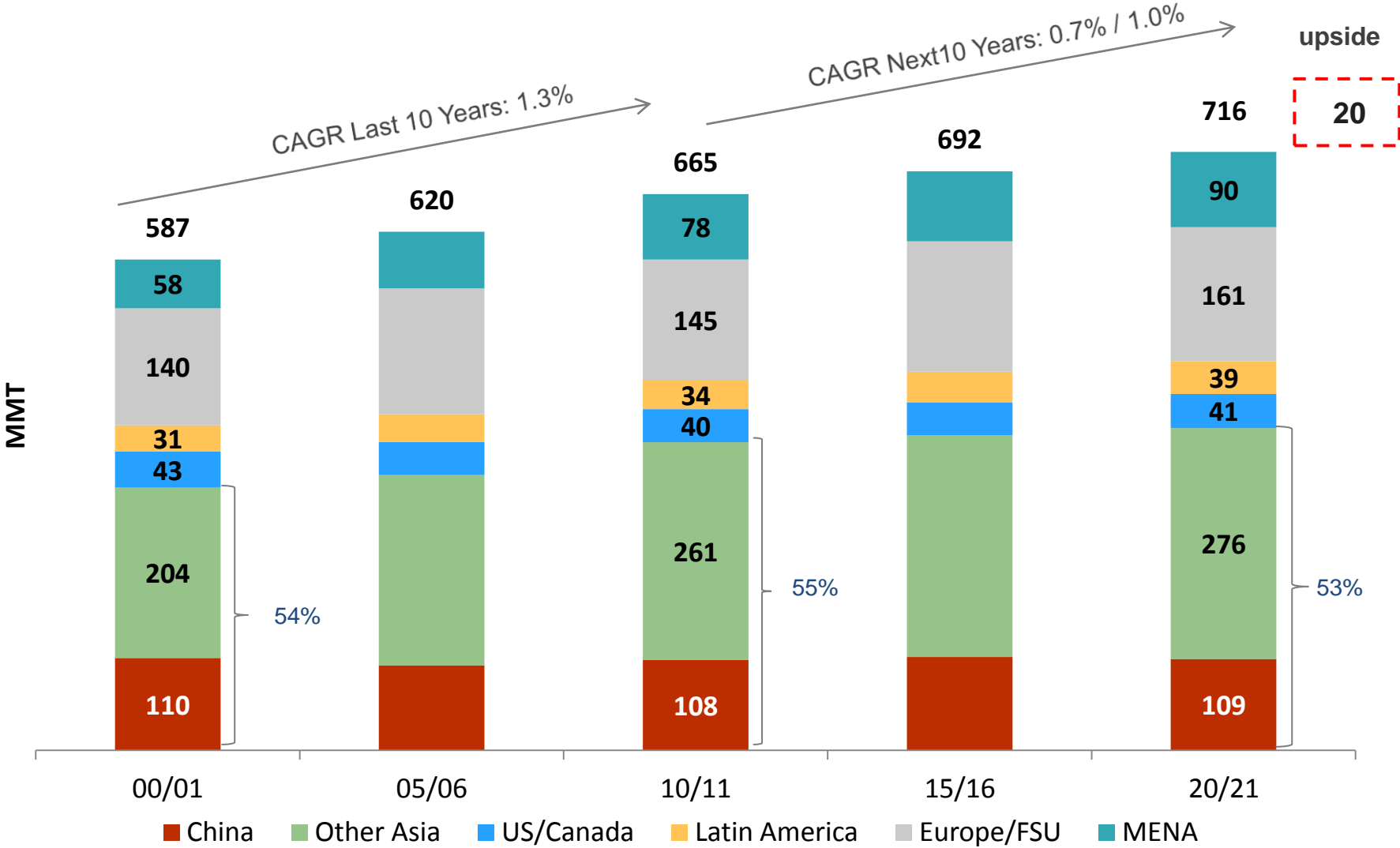
Source: Food and Agriculture Policy Research Institute, Iowa State University, LMC, Private Estimate.

# Corn Demand Growth Driven by US Ethanol



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate.

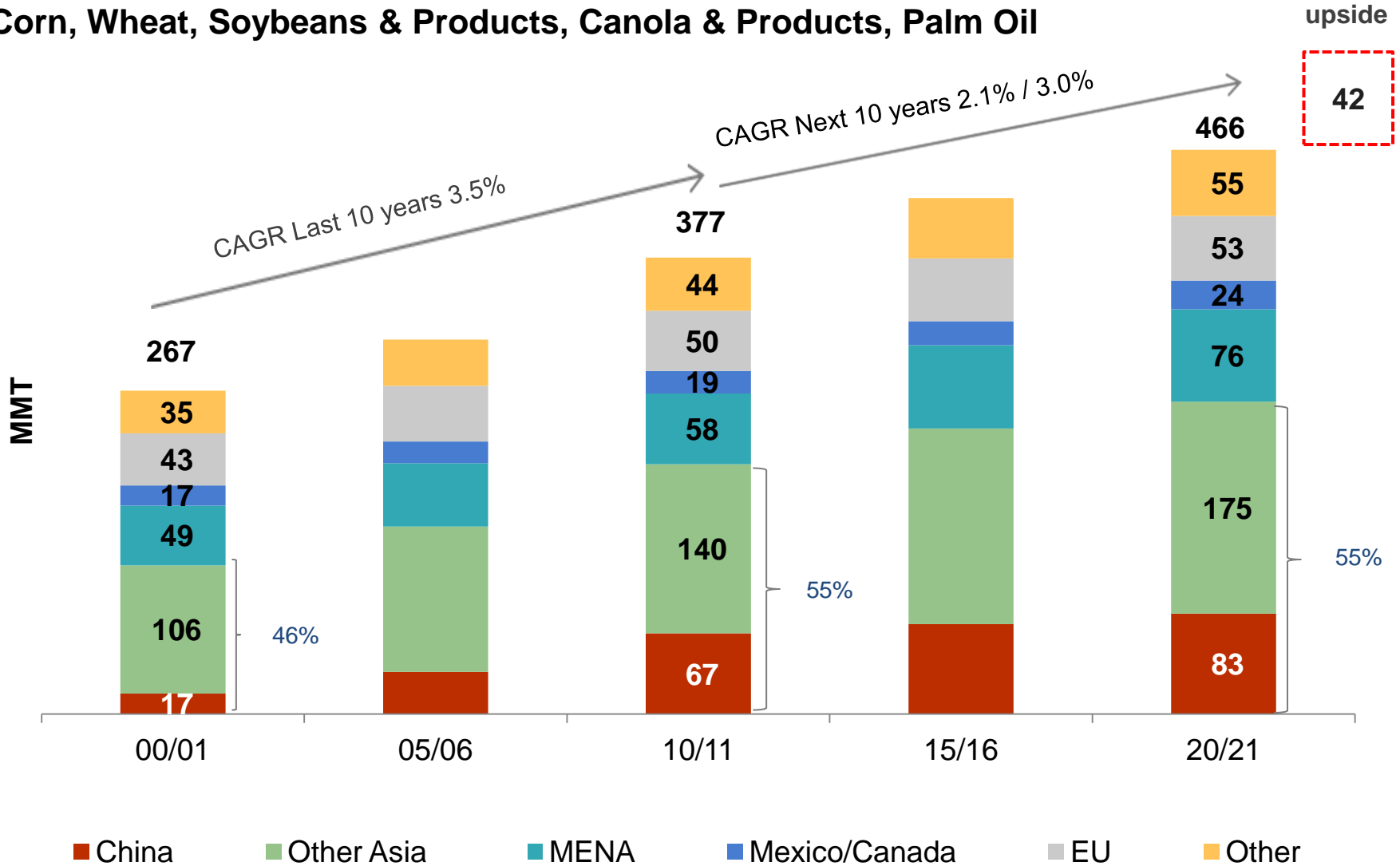
# Modest Growth in Wheat Consumption



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate.

# Resulting in Strong Growth in Global Trade

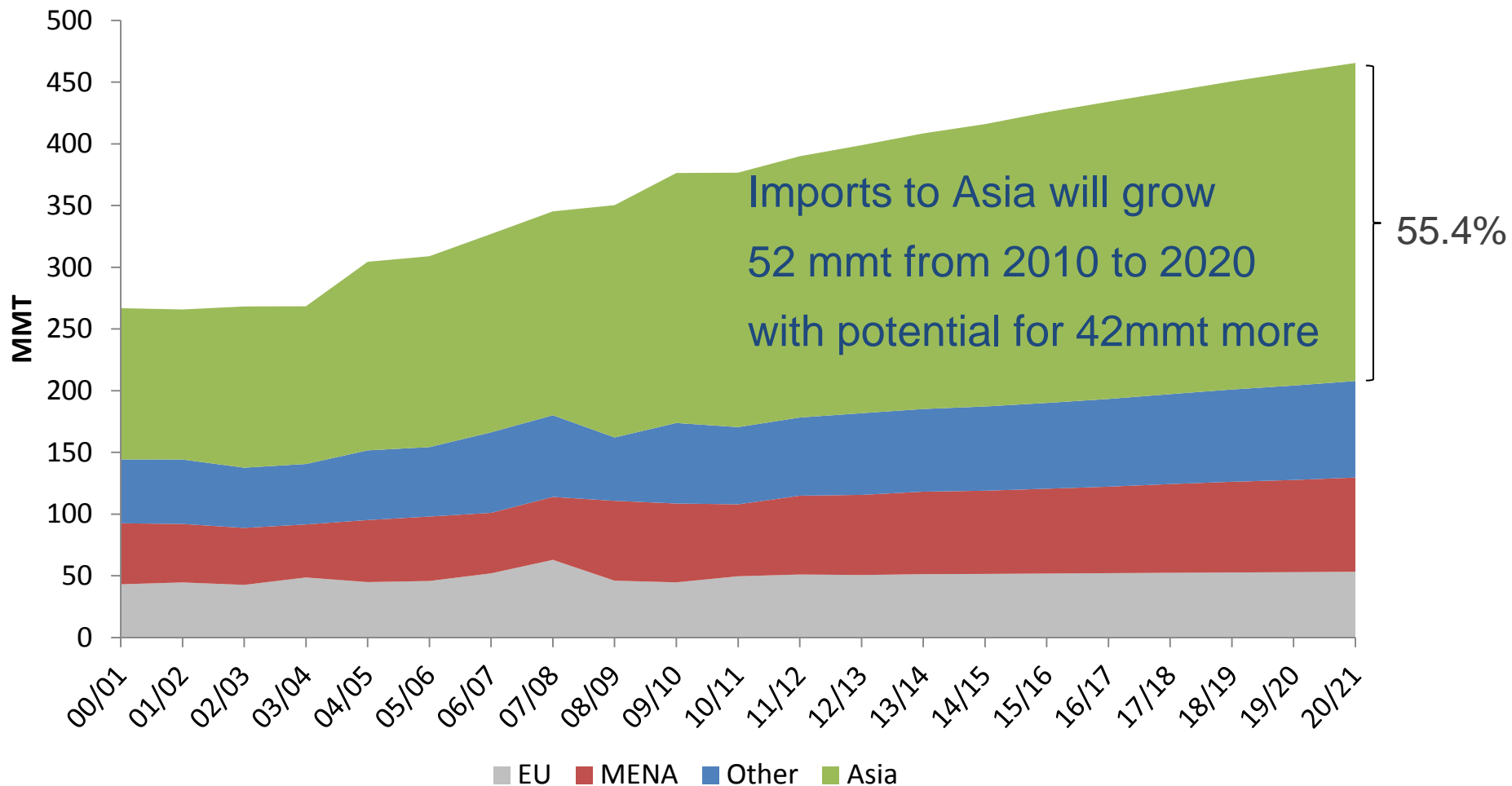
Corn, Wheat, Soybeans & Products, Canola & Products, Palm Oil



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate

# Asia Accounts For 57-65% of Trade Growth

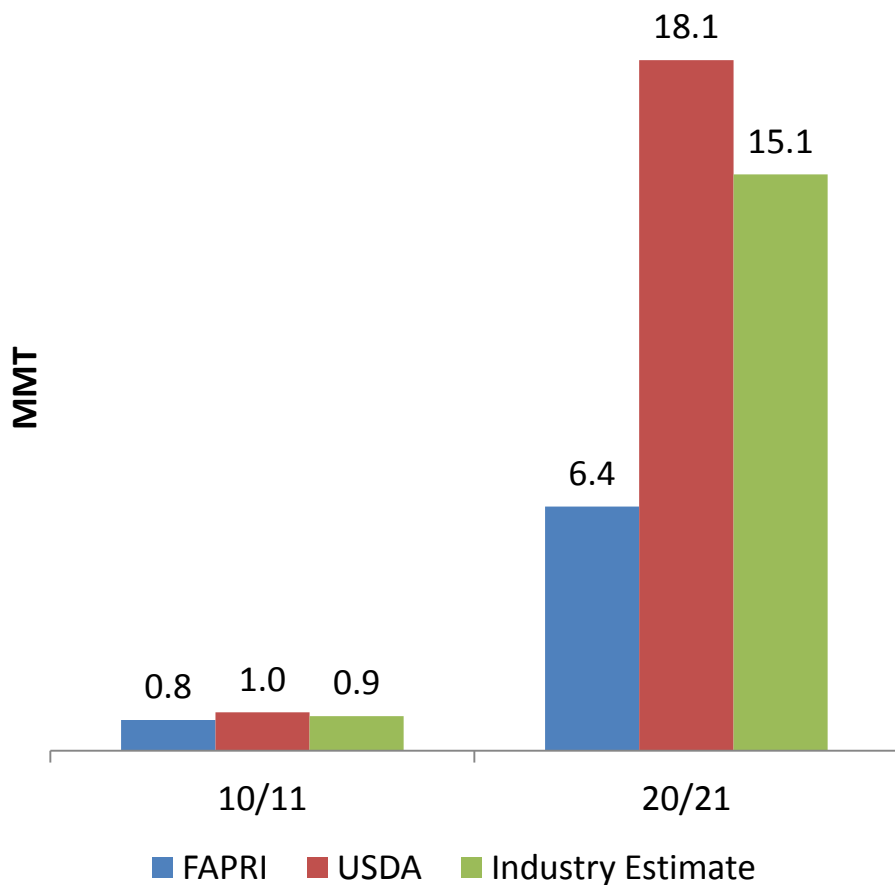
Corn, Wheat, Soybeans & Products, Canola & Products, Palm Oil



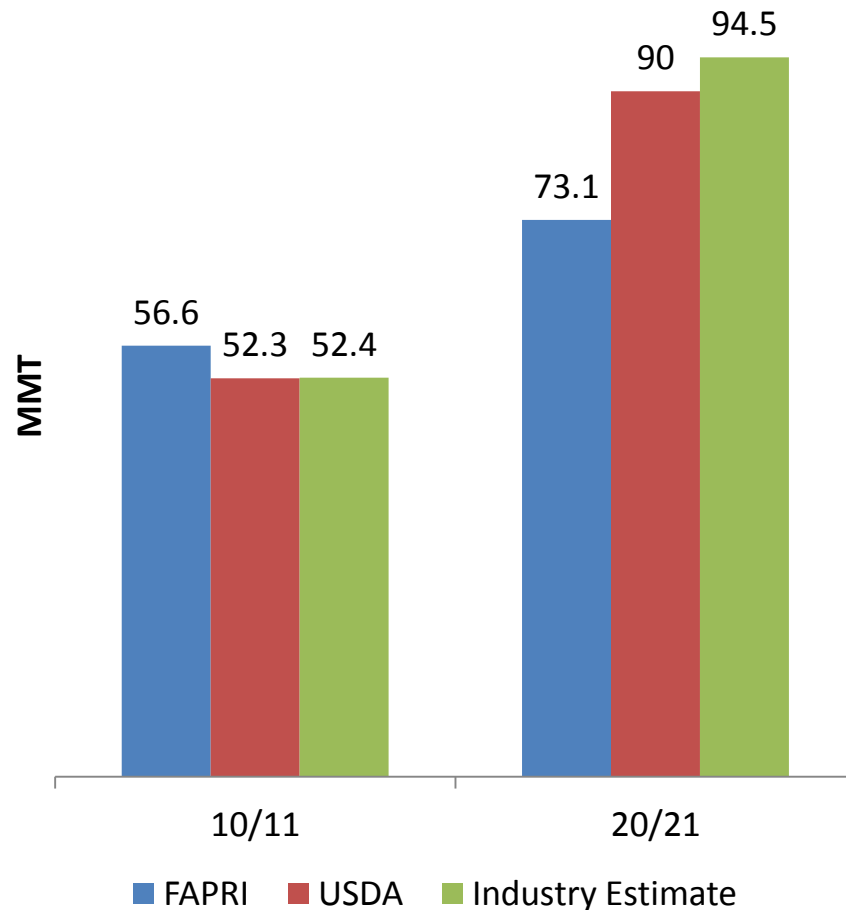
Source: Food and Agriculture Policy Research Institute, University of Iowa.

# China is the Wildcard – Range of Estimates

## Corn



## Soybeans



Source: Food and Agriculture Policy Research Institute, Iowa State University, USDA, Industry Estimate.

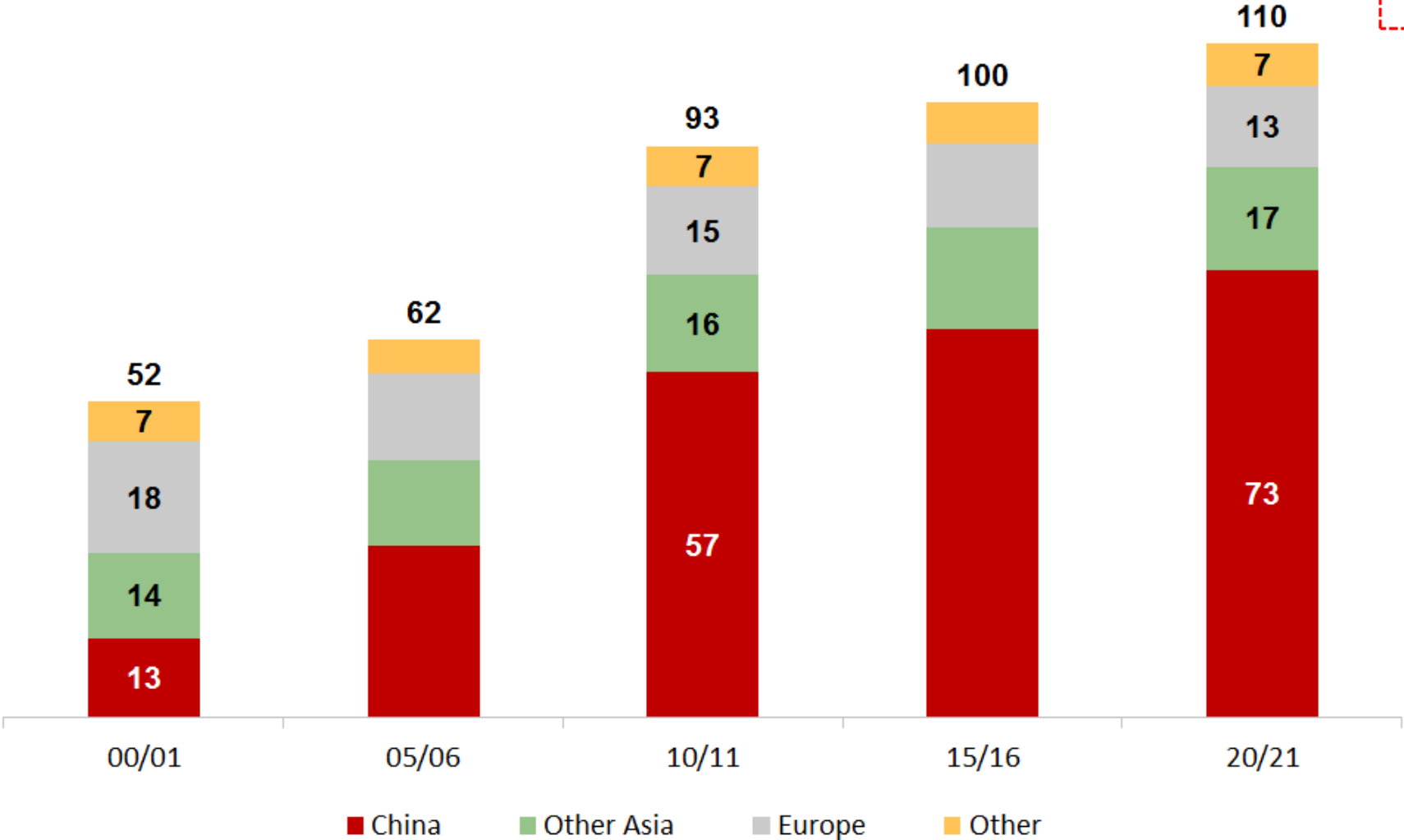


# Growth in China Soybean Imports Will Continue

upside

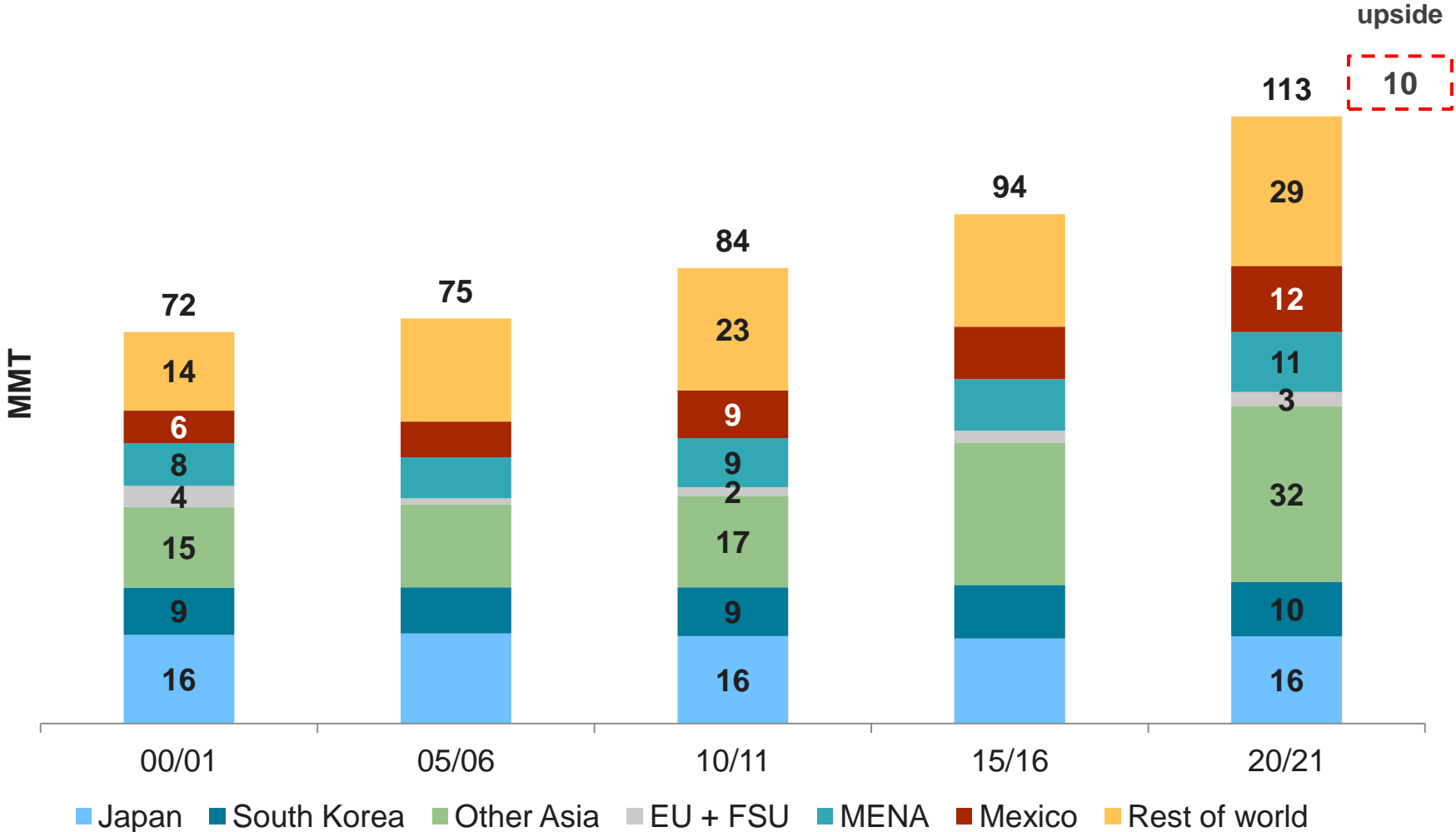
32

MMT



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate

# Import Demand for Corn Is Also Led by Asia



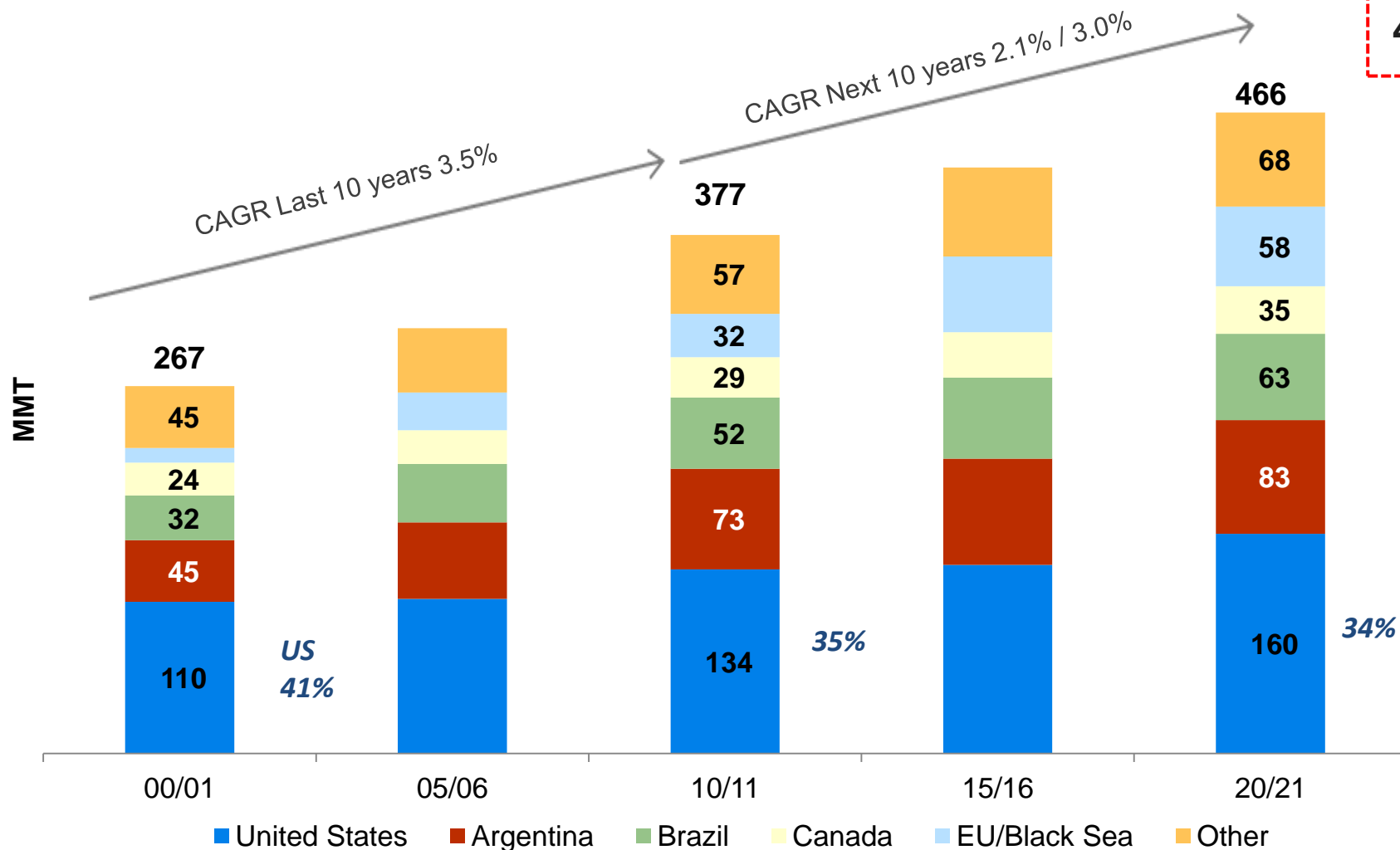
Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate.

# US is Barely Hanging On to Share of Global Trade

Corn, Wheat, Soybeans & Products, Canola & Products, Palm Oil

upside

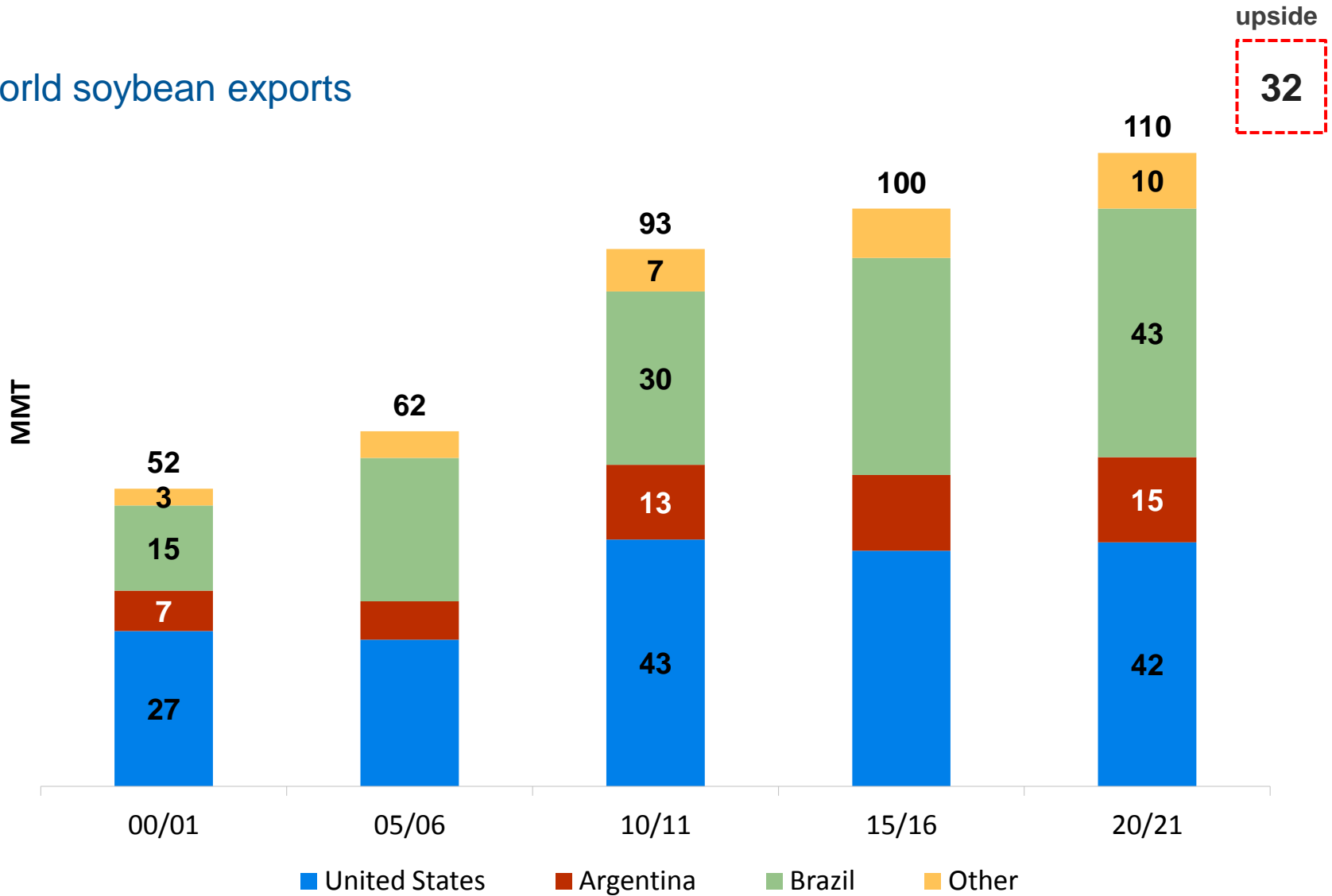
42



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate

# Brazil Captures Most of Soybeans Export Growth

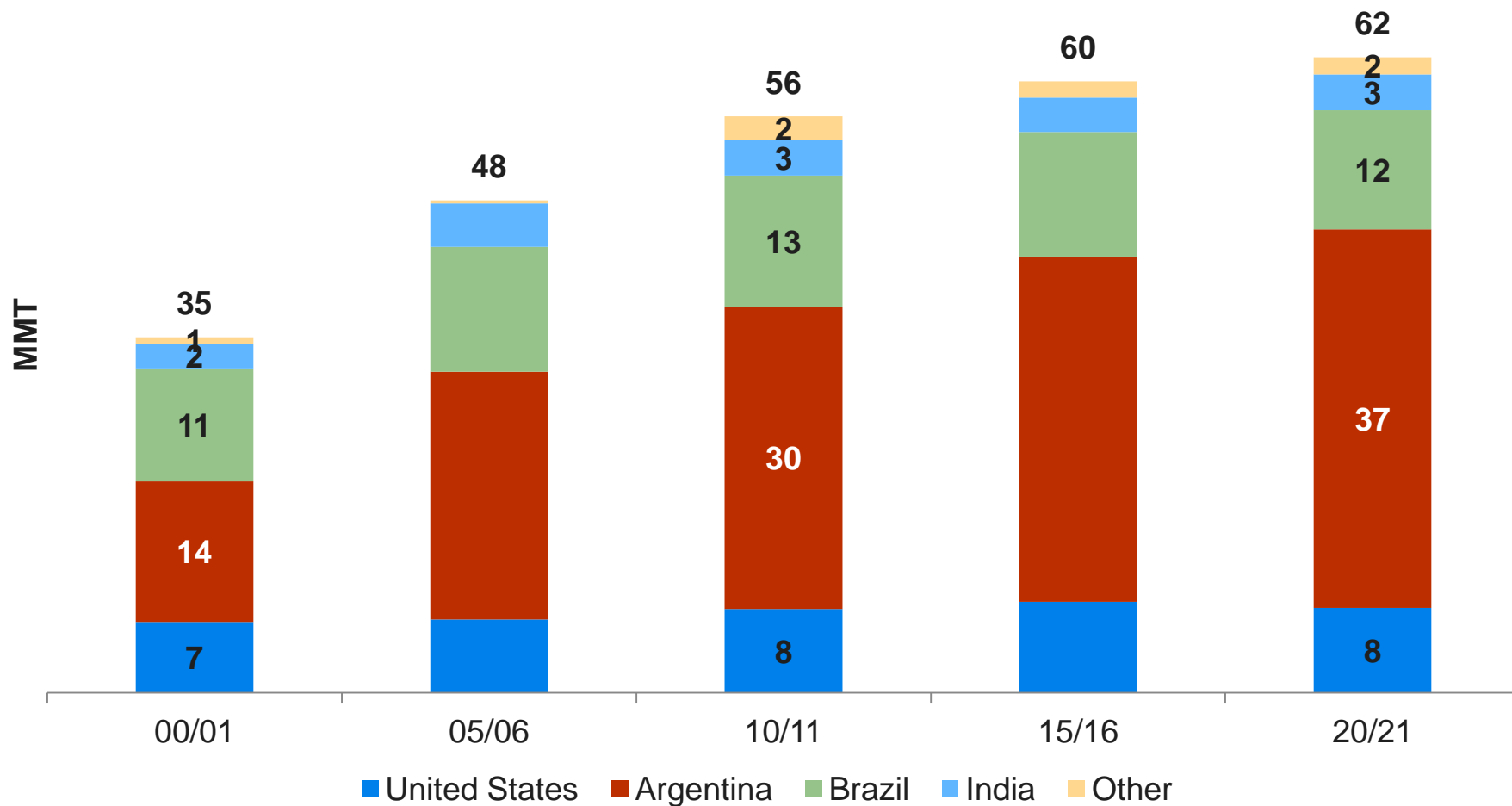
World soybean exports



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate.

# Argentina Takes over 50% of Global Trade in SBM

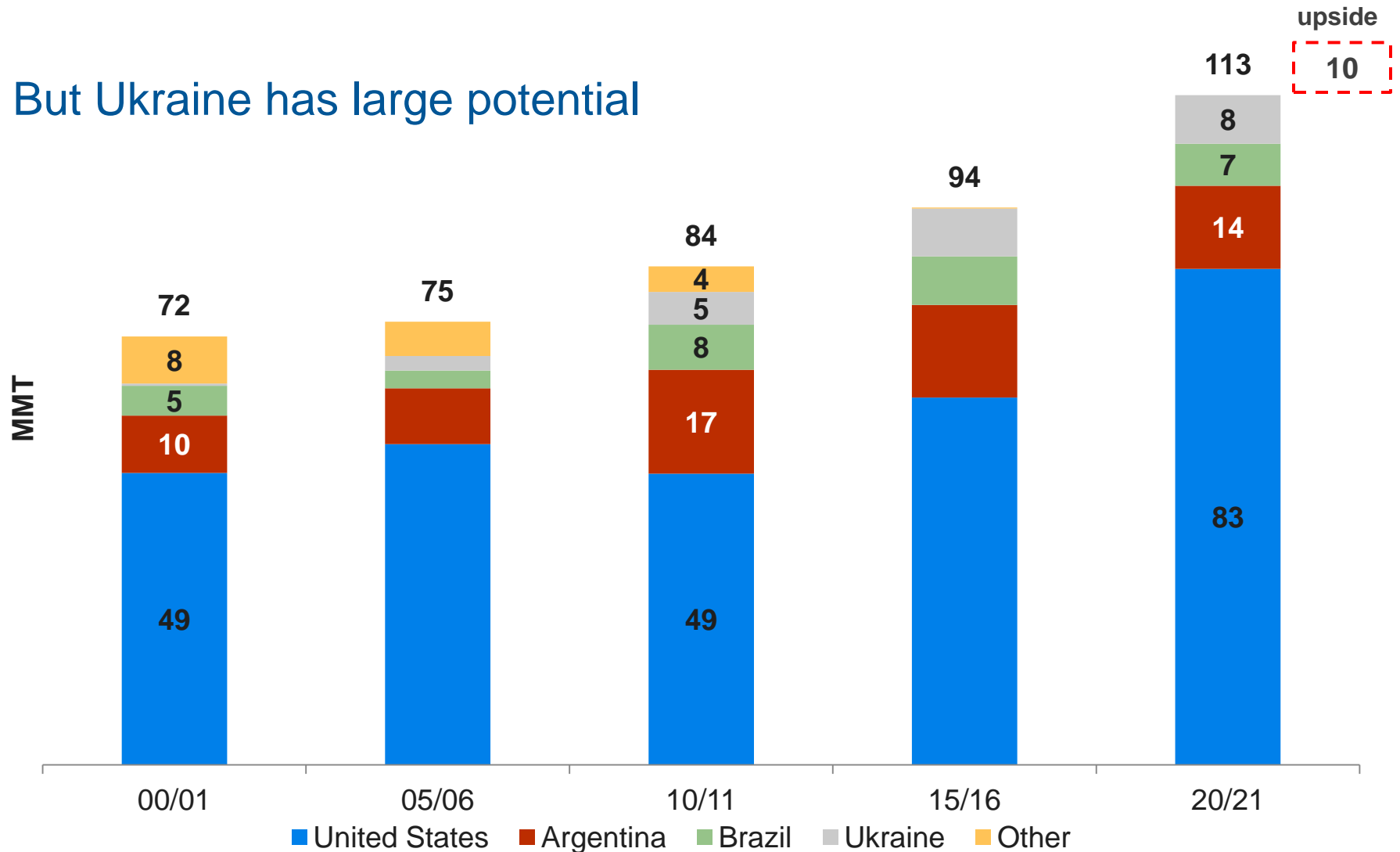
## World Soymeal Exports



Source: Food and Agriculture Policy Research Institute, Iowa State University.

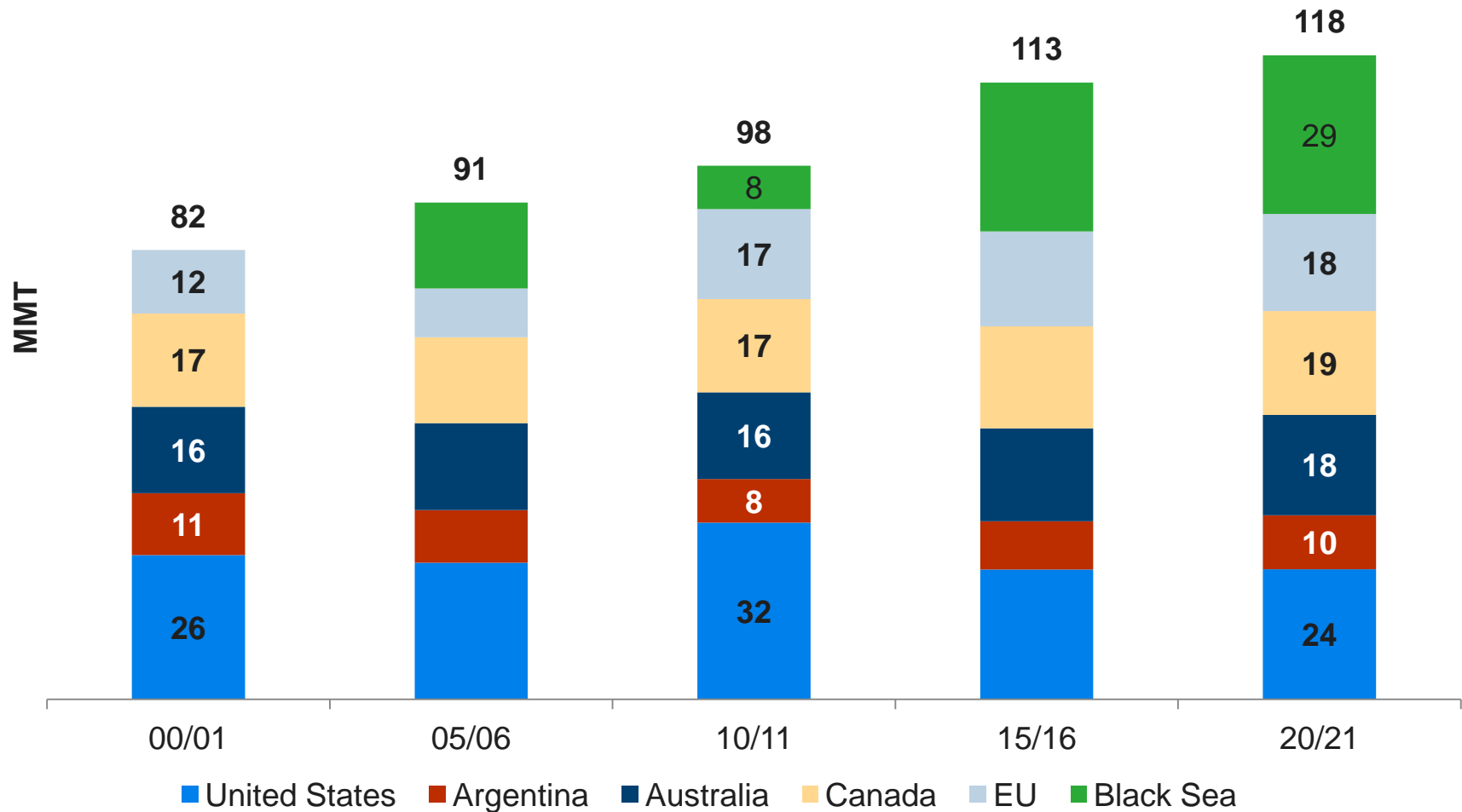
# US Captures Majority of Corn Export Growth

But Ukraine has large potential



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate

# Black Sea Supplies Growing Wheat Trade



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate.

# Global trade will stay very dynamic

Global trade grows to almost 500mmt by 2020

- About 25% of global consumption

More origins supply global trade

- Black Sea Region and So America
- Potentially risk reducing as production risk is spread out
- But some origins are more volatile both in climate and politics

Very small regional supply disruptions create shifts in trade flow

- Shifts above 10mmt will push “receiving origins” to peak capacity during concentrated periods

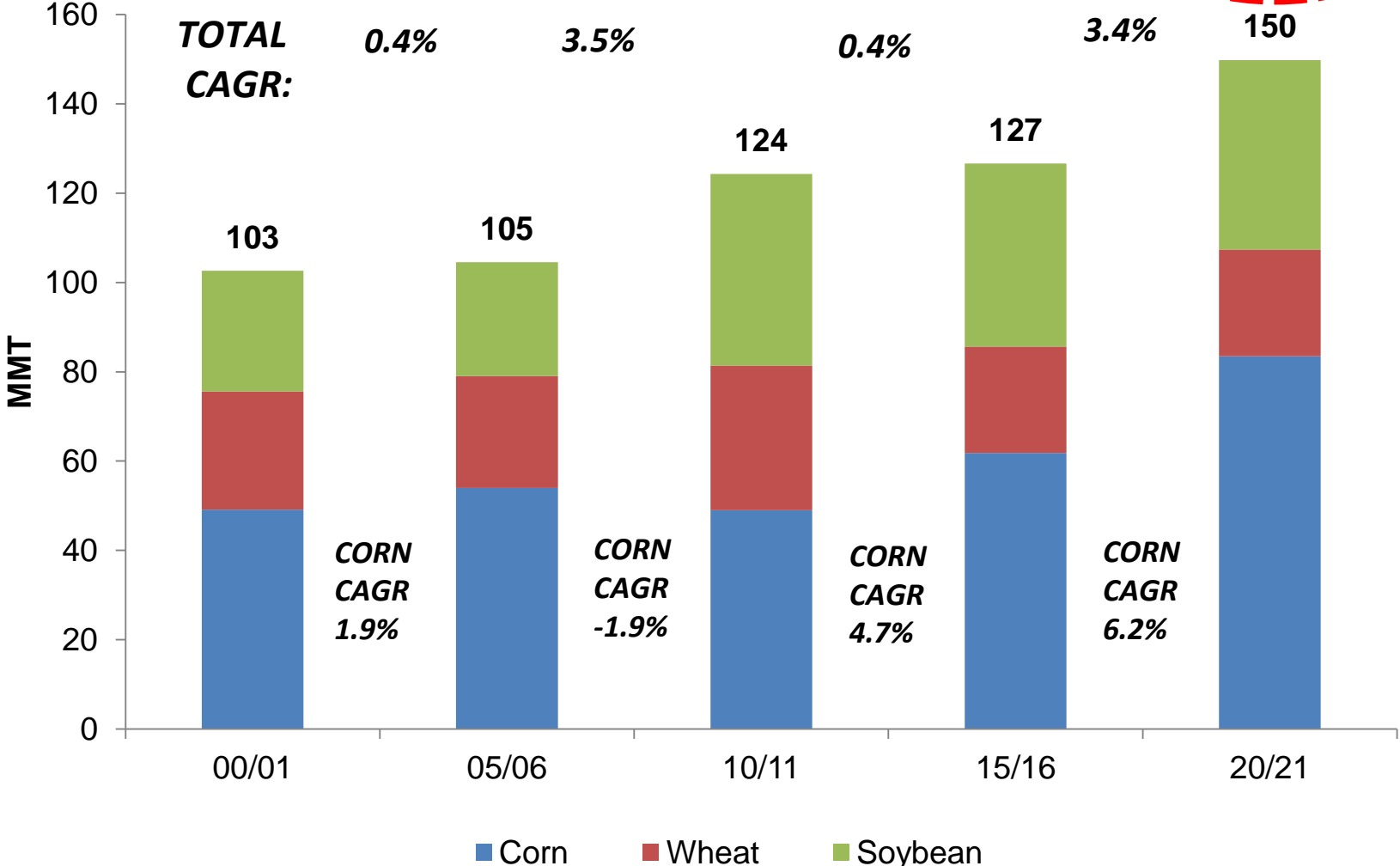
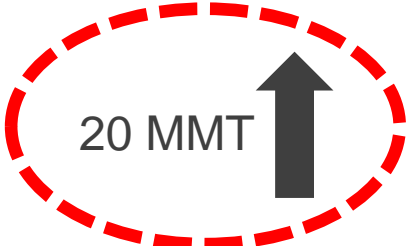
The cause of market volatility is the underlying supply disruption and a continued very tight global balance

- Free trade is essential to balance markets

Source: Food and Agriculture Policy Research Institute, Iowa State University.



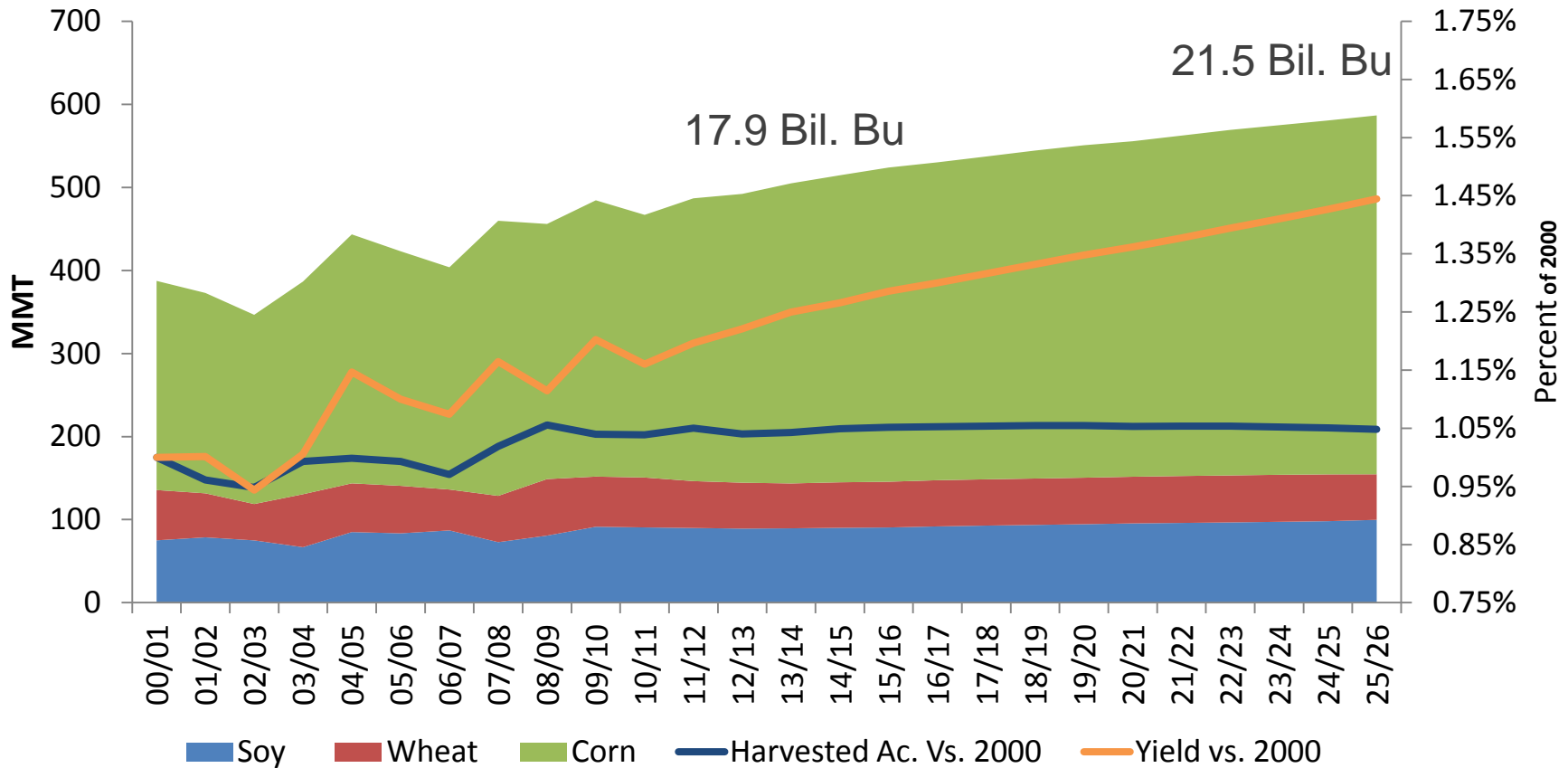
# Resulting Impact on US Exports



Source: Food and Agriculture Policy Research Institute, Iowa State University, Private Estimate

# Yields Advance to Meet Demand for US Crops

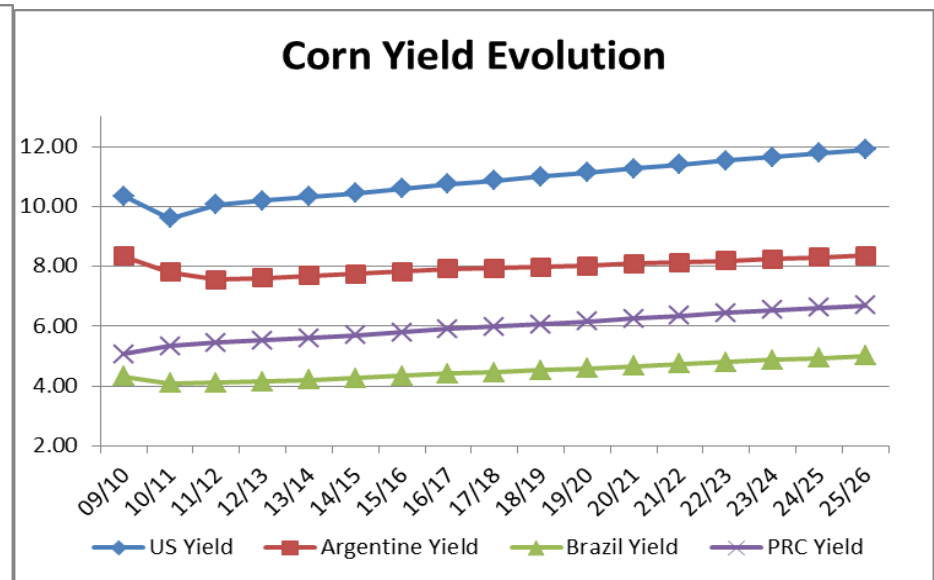
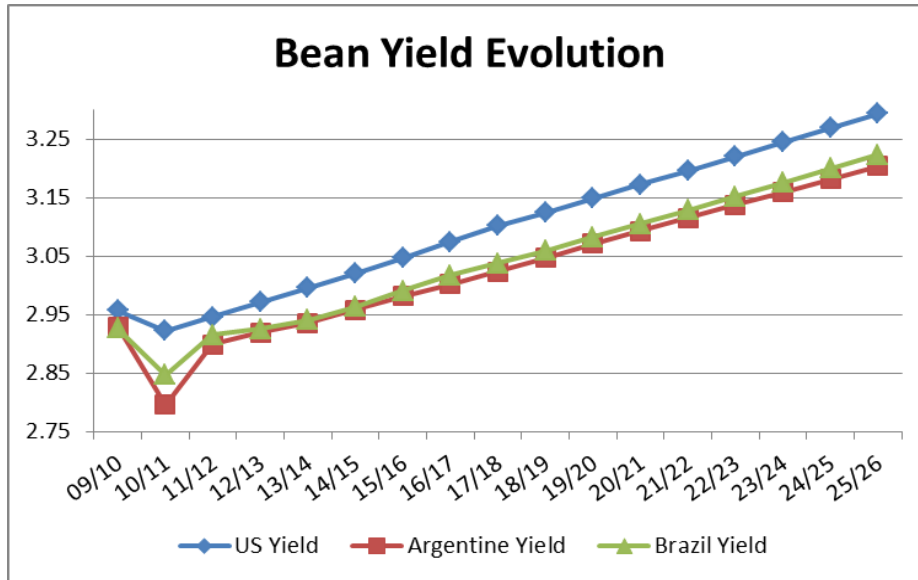
## Corn, Wheat, Soybeans



- *Yields advance by 44%, Acres by 5%*

Source: Food and Agriculture Policy Research Institute, Iowa State University.

# Yield Gap In Corn Continues



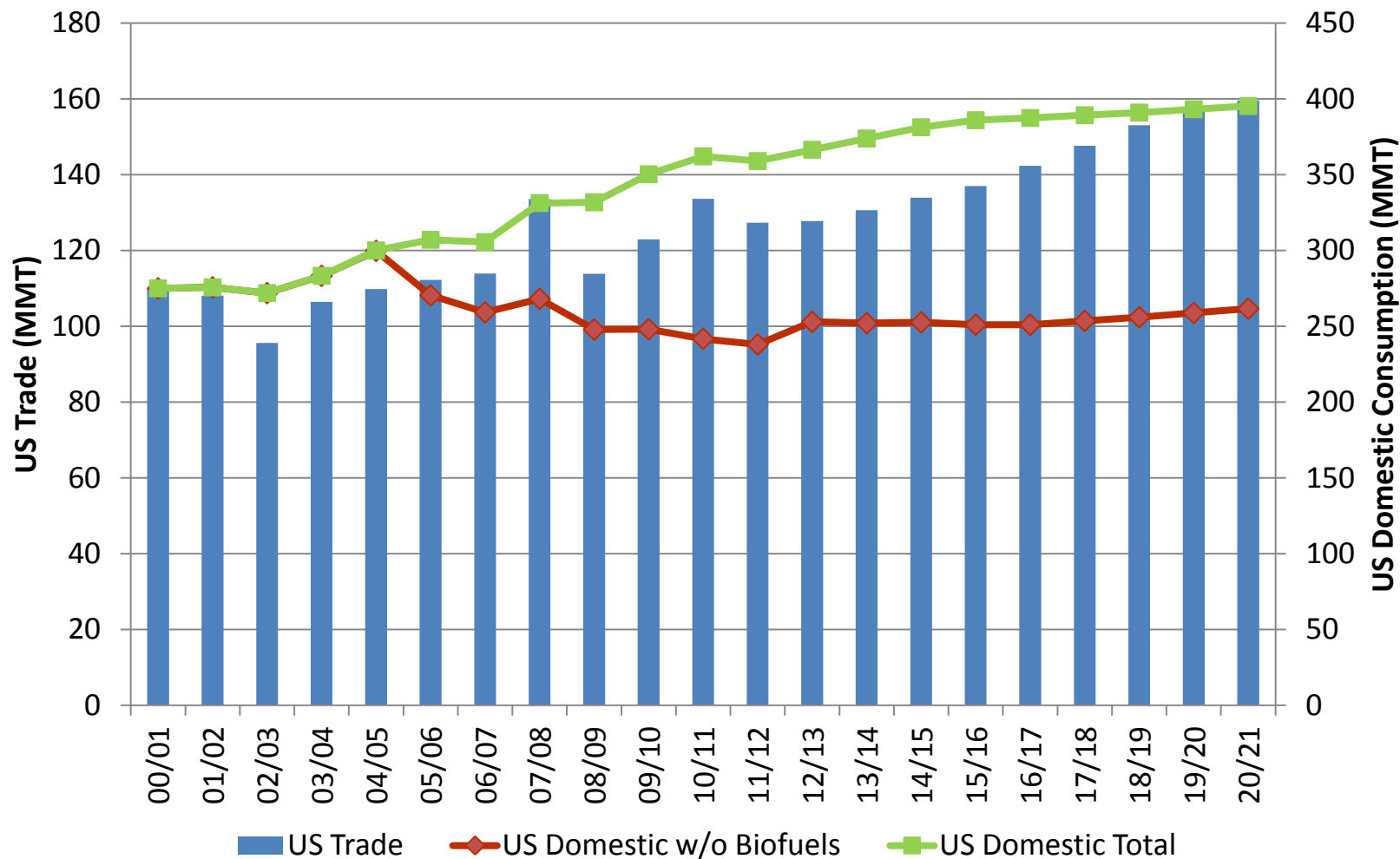
- Americas bean yields are similar
- Yield gap mostly closed

- US corn yields remain superior
- Quality of land
- Technology and capital intensity
- Over time others might catch up

Source: Food and Agriculture Policy Research Institute, Iowa State University.

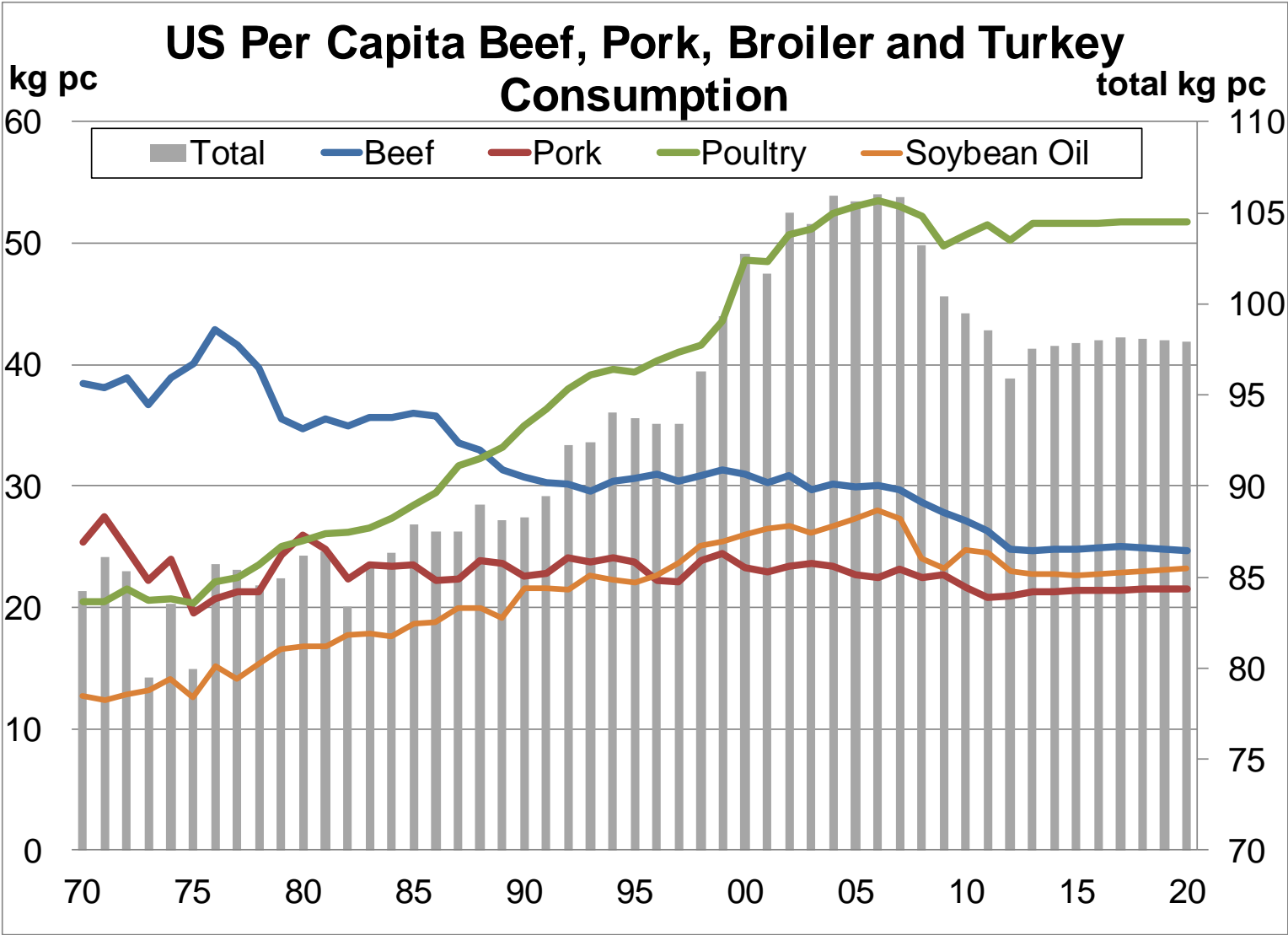
# US Export Growth Potential is Bigger than Domestic

## Corn, Wheat, Soybeans & Products



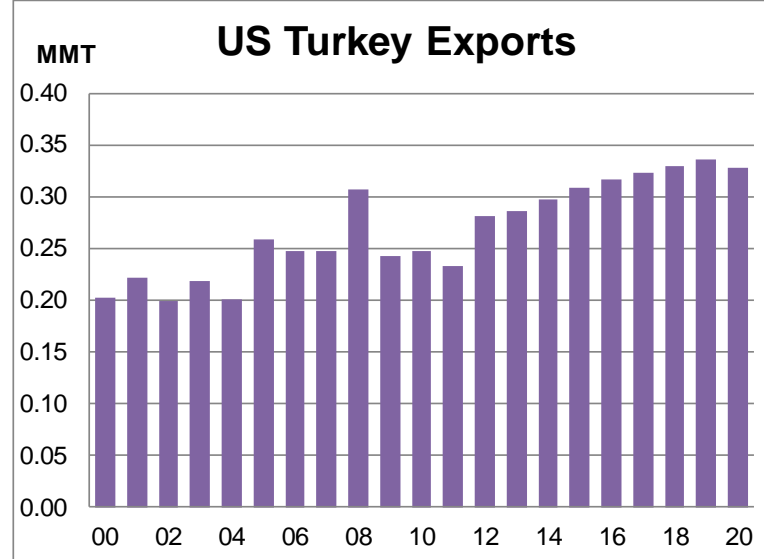
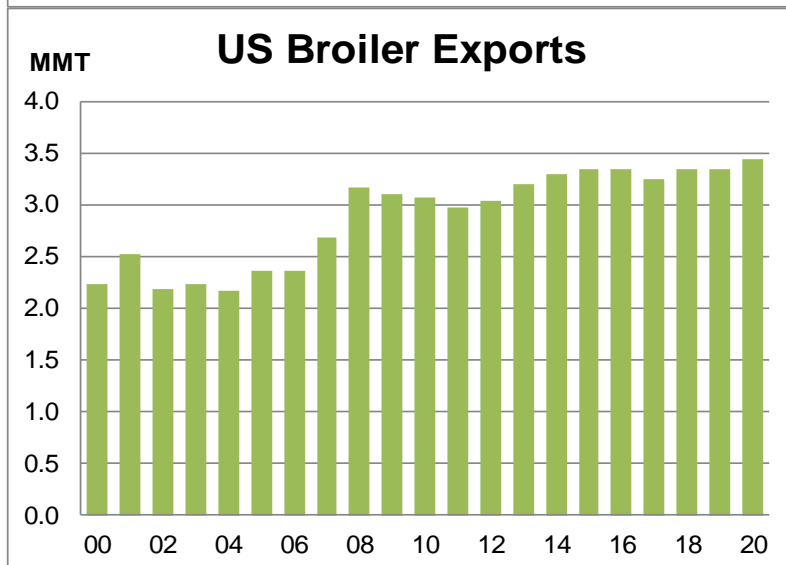
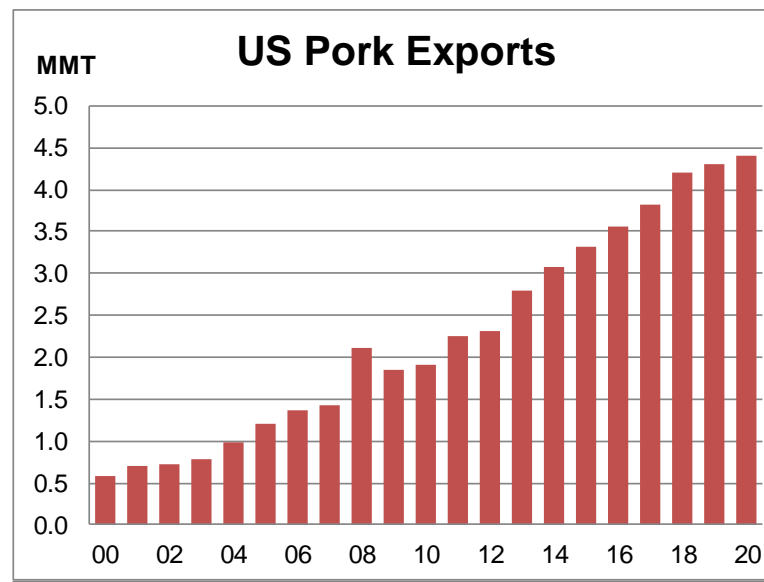
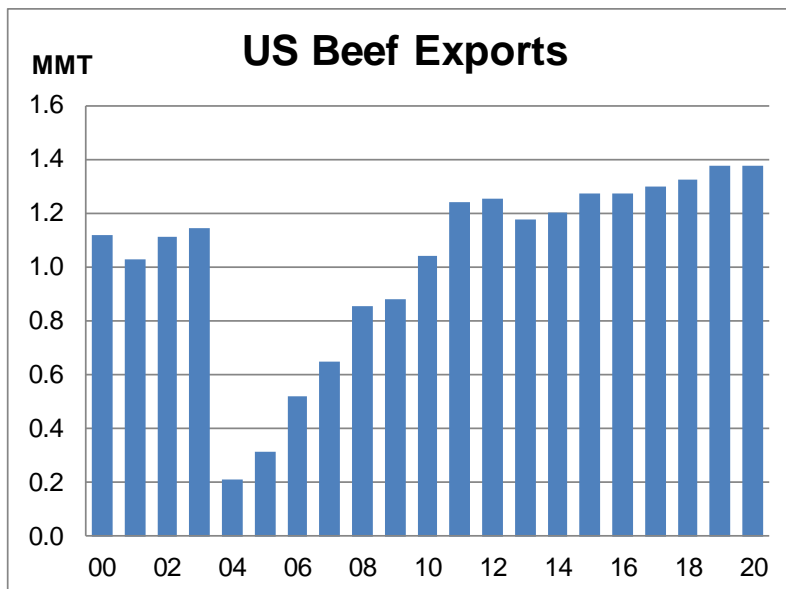
Source: Food and Agriculture Policy Research Institute, Iowa State University.

# US Per Capita Food Consumption has Peaked?



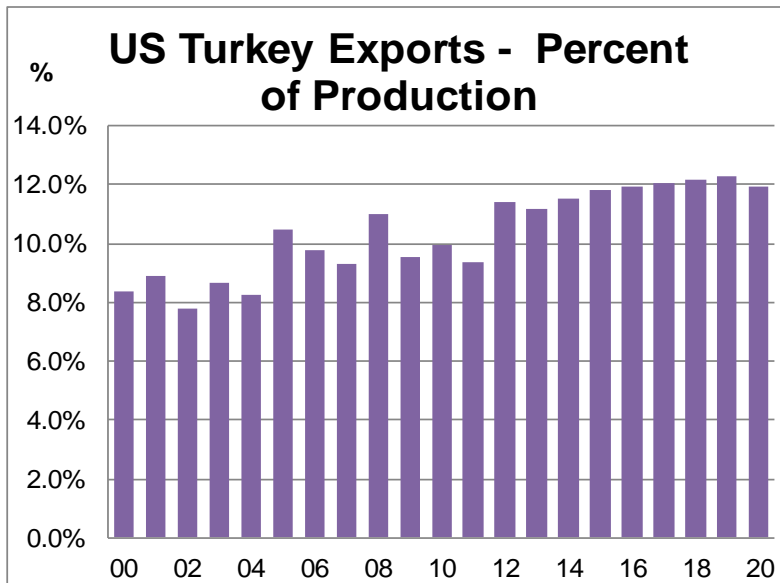
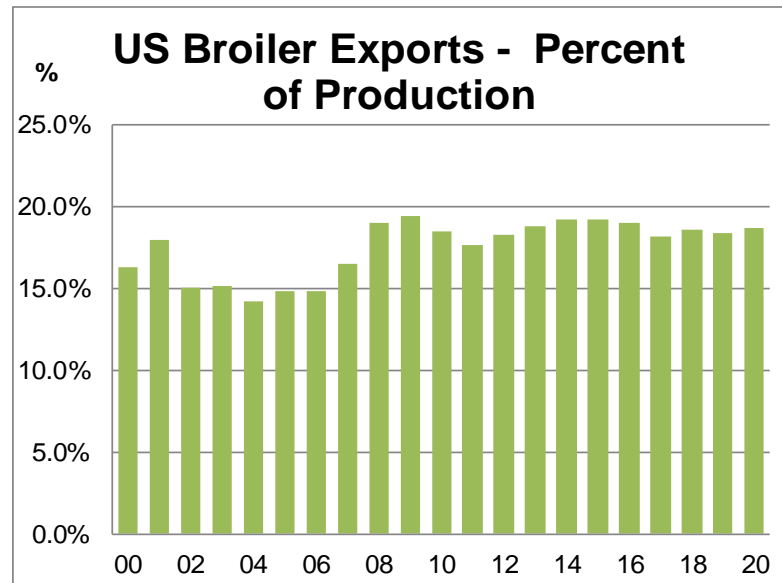
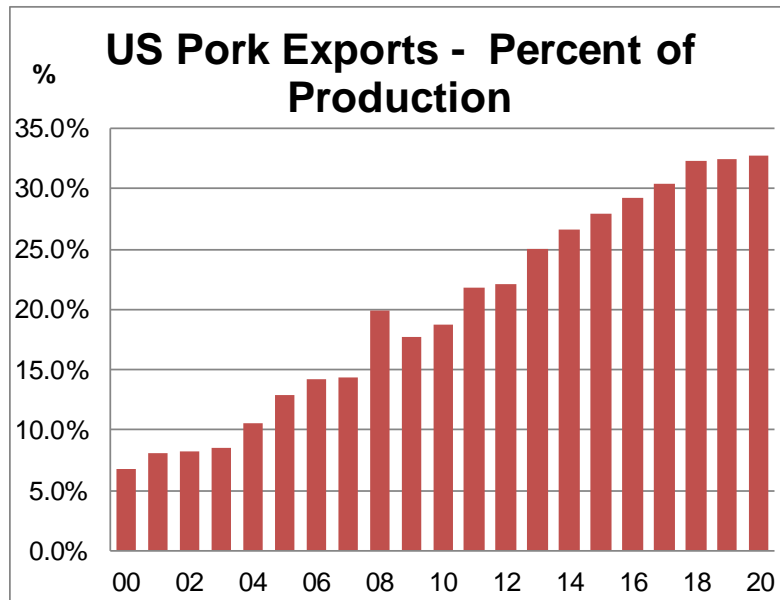
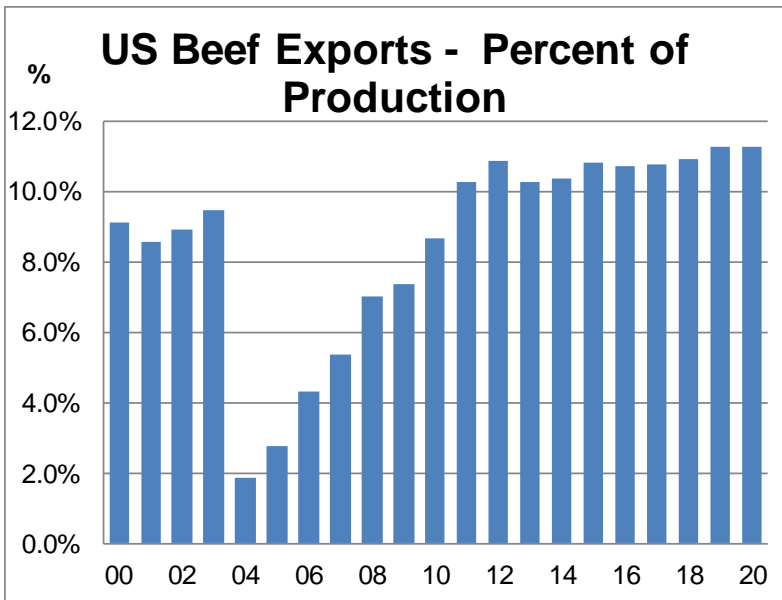
Source: USDA, Bunge estimates

# But US Protein Exports Set Record in 2011

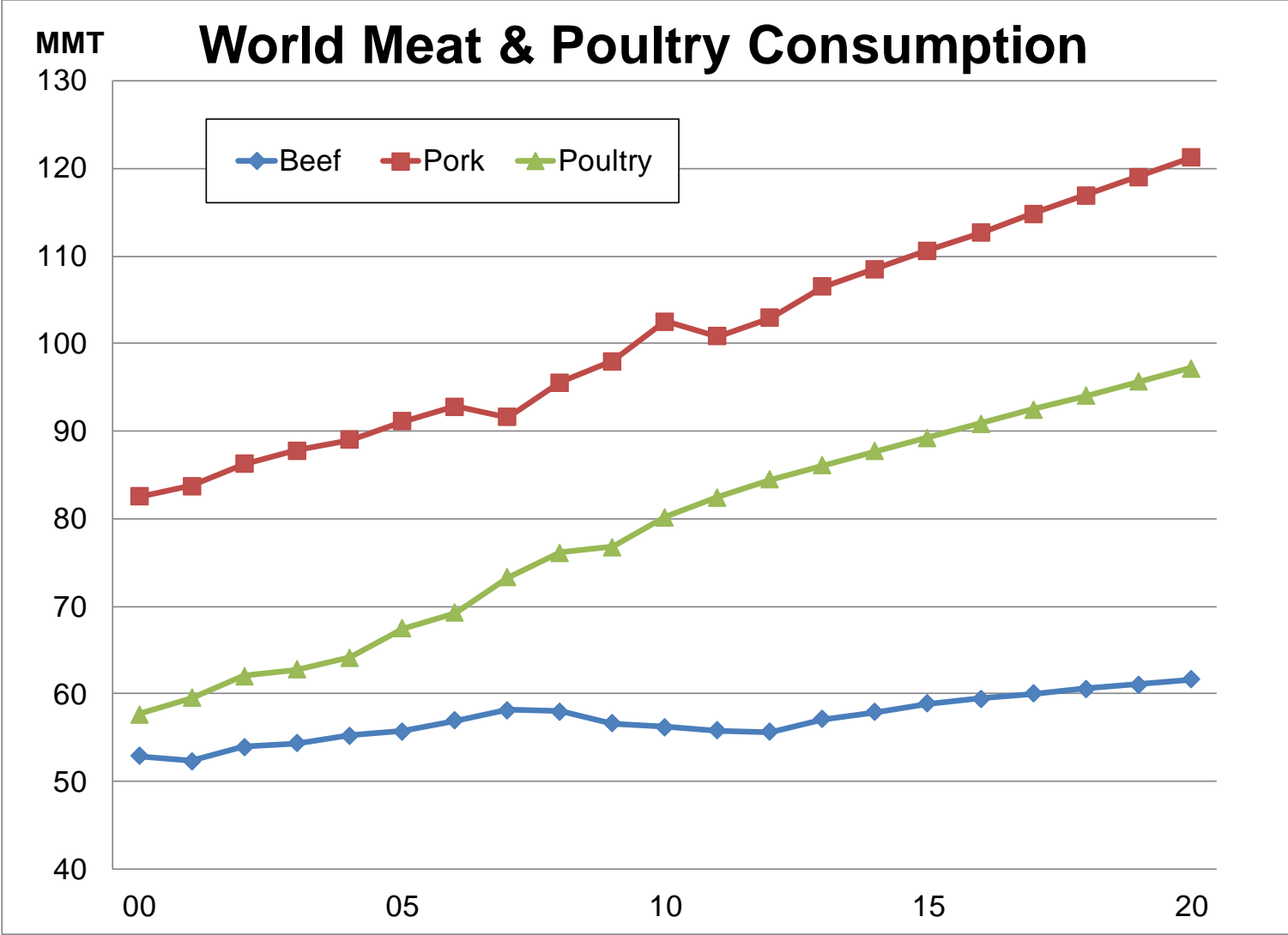


Source: USDA, Bunge estimates

# More of US Meat Protein Consumed Abroad



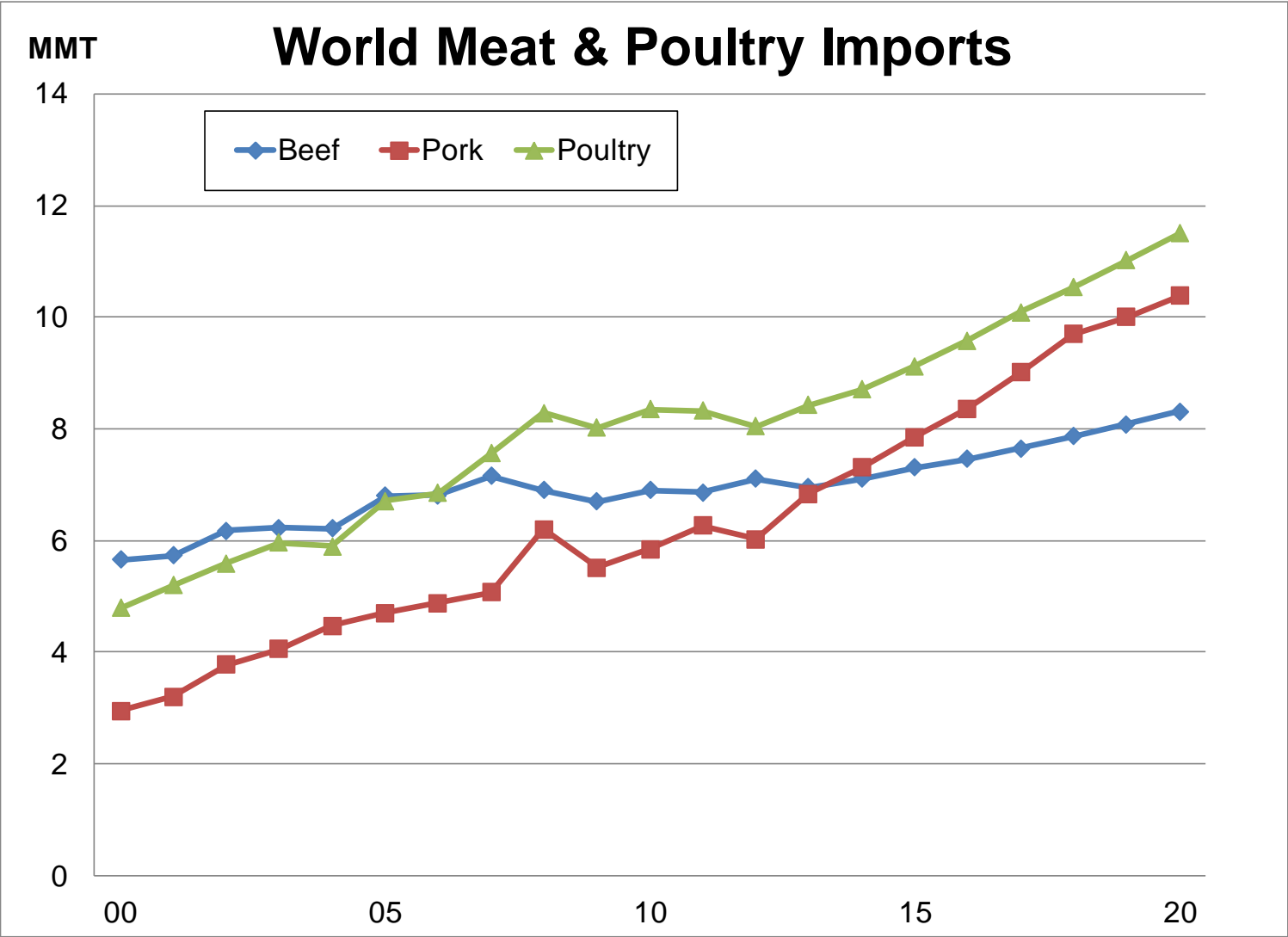
# Pork and Chicken Lead Global Consumption Growth



Source USDA, Bunge estimates

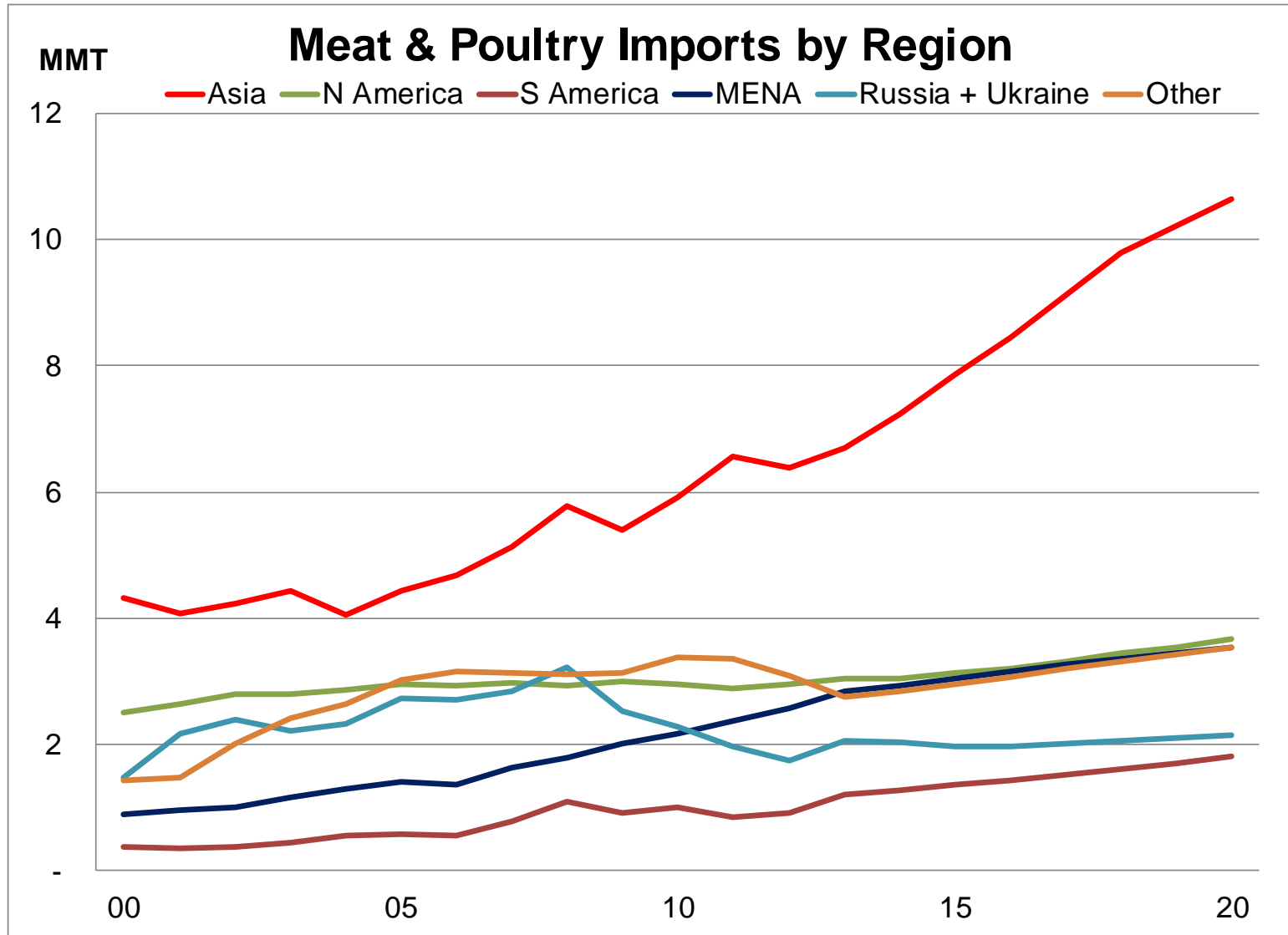


# Pork and Chicken Lead Import Demand Growth



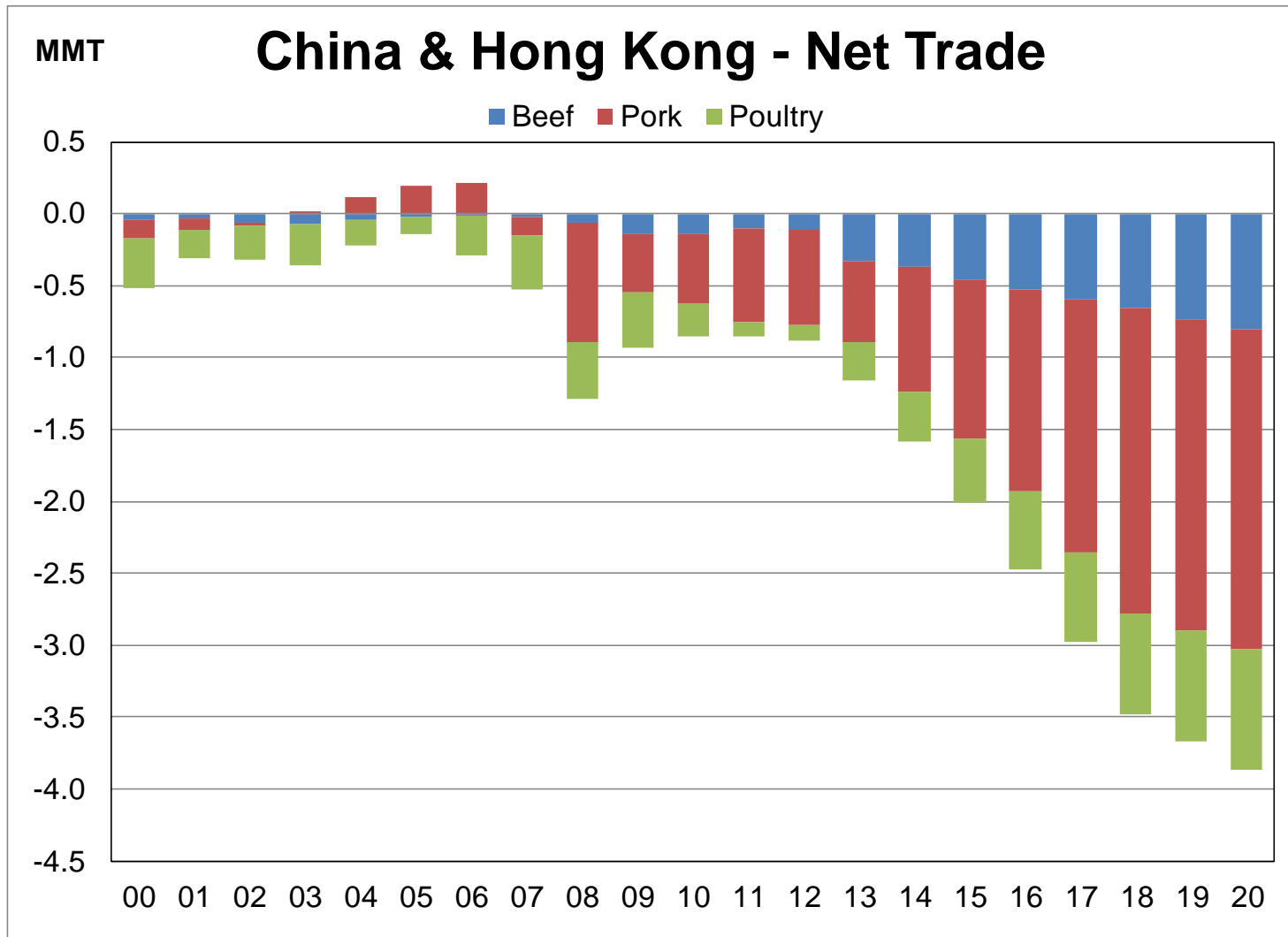
Source USDA, Bunge estimates

# Asia & MENA Expected to Drive Trade Growth



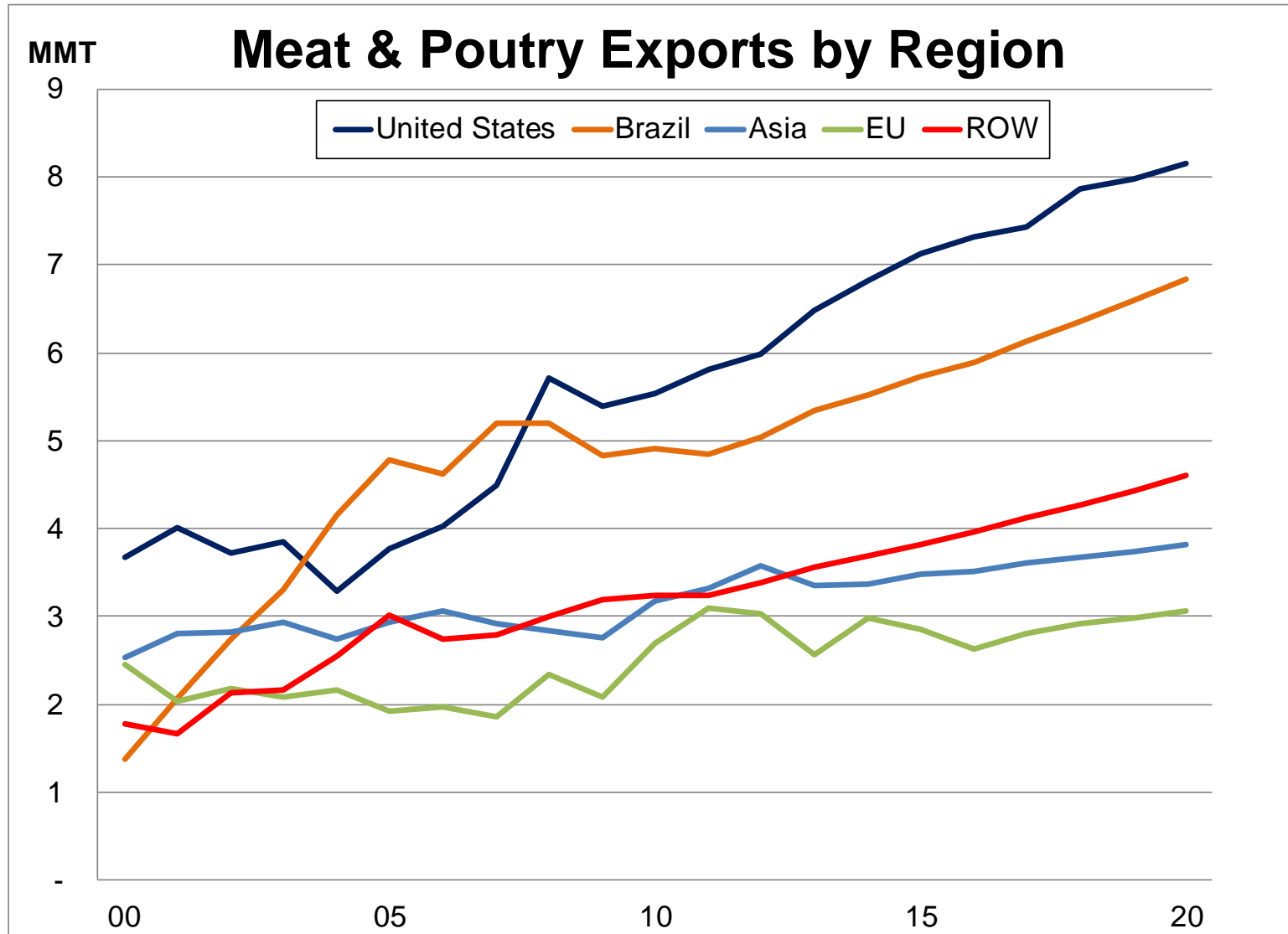
Source: Bunge estimates

# China Becomes a Structural Meat & Poultry Importer



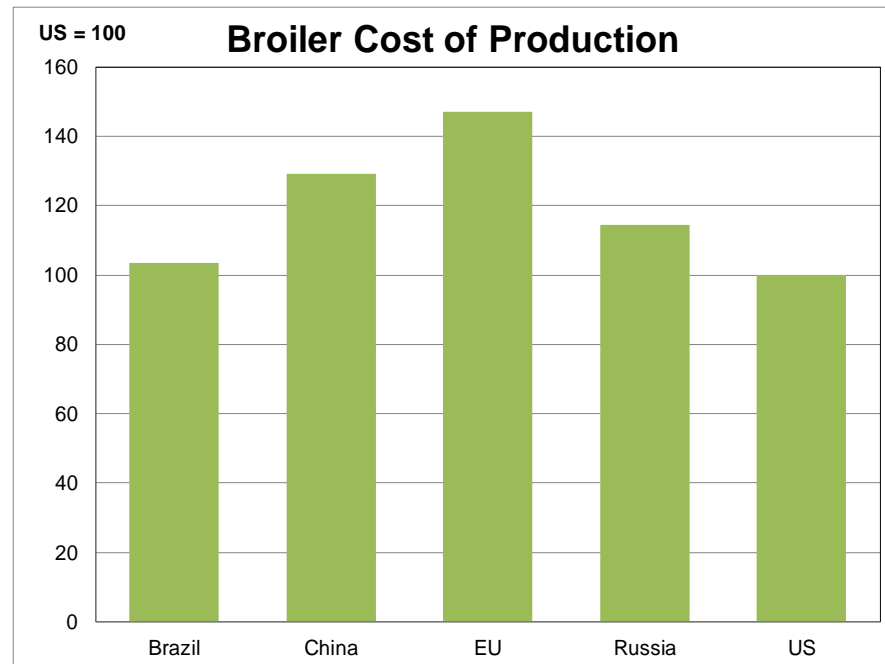
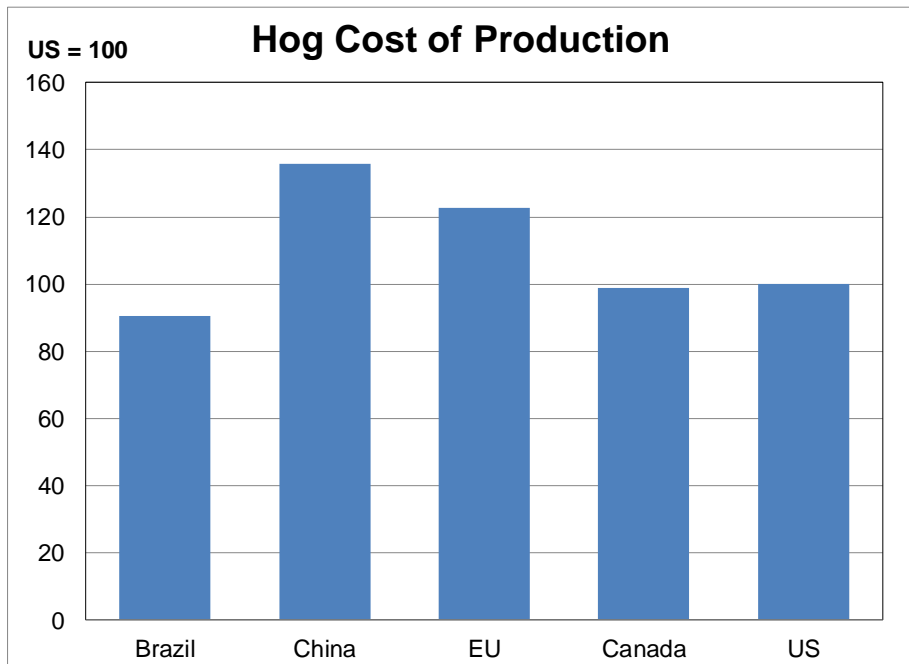
Source: Bunge estimates

# The US and Brazil Lead Export Growth



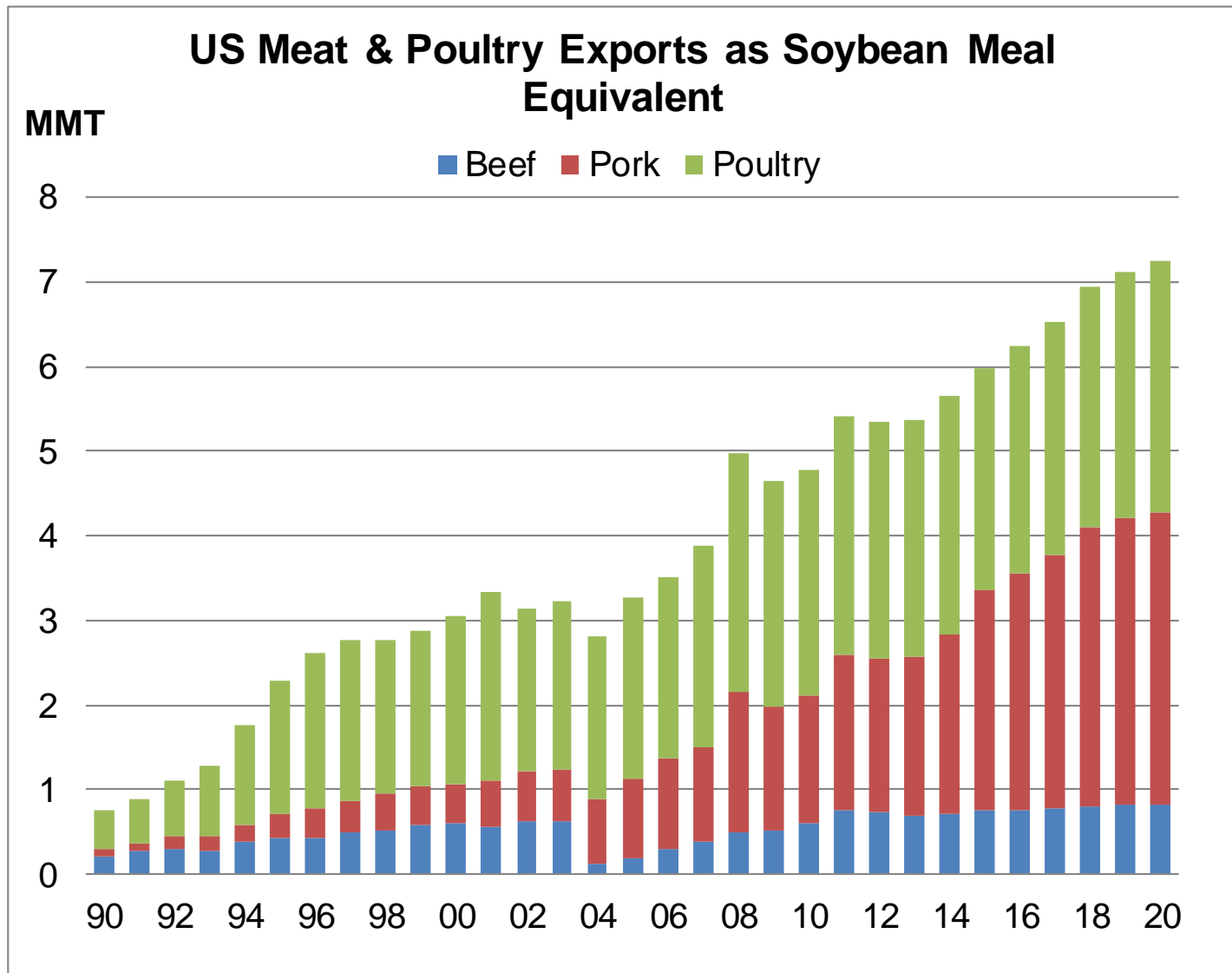
Source: Bunge estimates

# Cost of Production Favors Production Growth in the US and Brazil



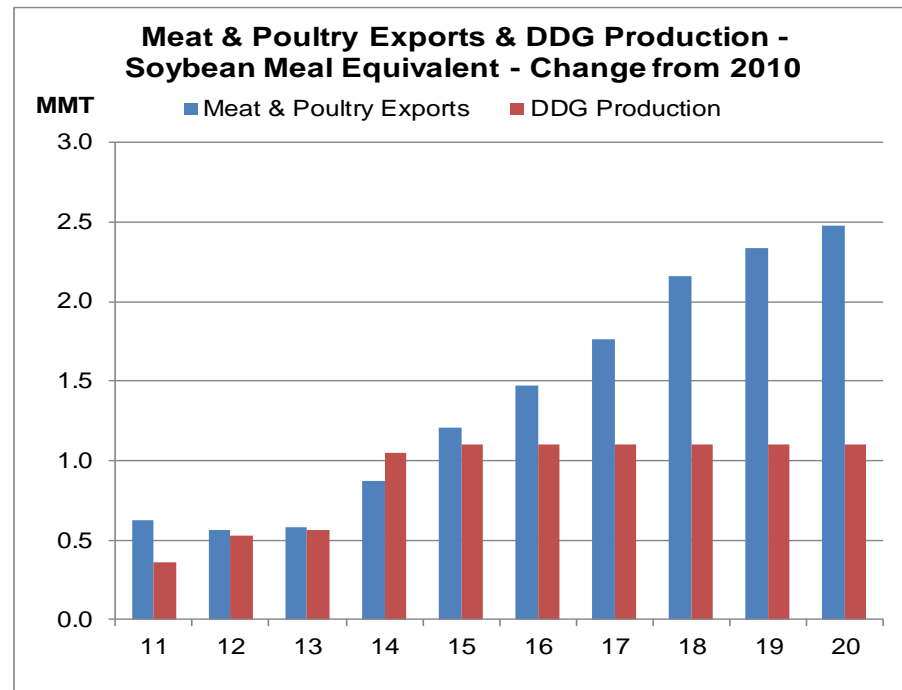
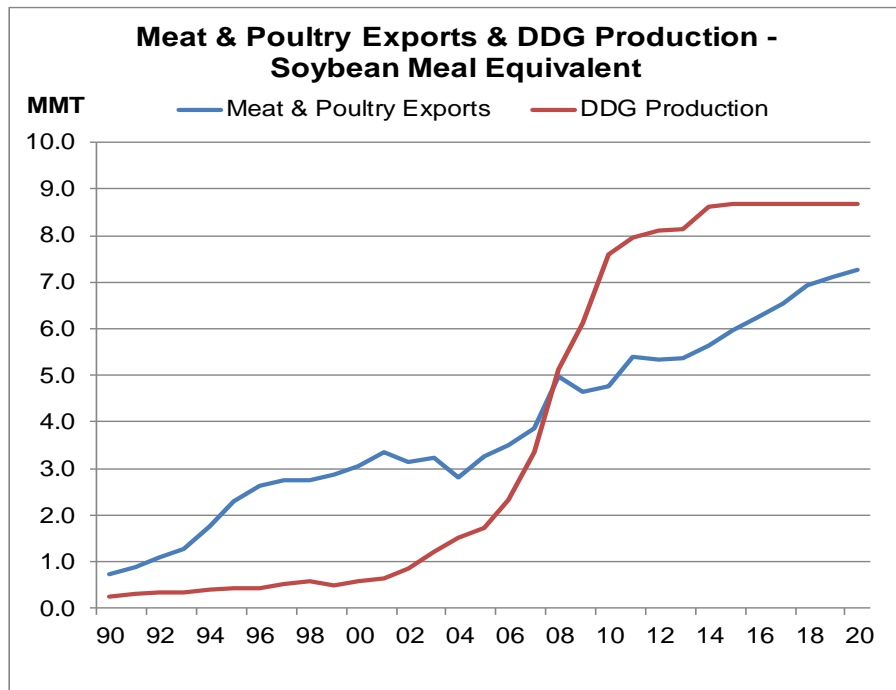
Source Bunge estimates

# Meat Exports Create Significant Protein Meal Demand



Source: Bunge estimates

# Meat Exports Growth Begins to Offset Loss of SBM Demand Due to DDGs



Assumes 1 pound of DDGs equals 0.23 pounds of soybean meal (USDA, October 2011)

Source USDA, Bunge Estimates

# Conclusions

World trade will expand by over 100milot next 9 years

- US can maintain its share of trade
- And significantly grow added value exports
- Total export potential is double that of domestic

Farming is profitable everywhere

- Flows move quickly to cheapest origin
- Global consumers are more flexible in formulation
- There are fewer – if any - captive customers

We should be more focused on promoting trade

- Trade facilitation – FTAs, and SPS implication - private and Govt
- Tight coordination on Biotec introductions
- Maintain superior export infrastructure

Source: Food and Agriculture Policy Research Institute, Iowa State University.