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# Highlights of USDA's Long-term Projections to 2024

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Paul Westcott  
U.S. Department of Agriculture  
Economic Research Service  
westcott@ers.usda.gov  
February 2015



# Presentation Topics

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- Background on long-term projections
- Overview of projections
- Key assumptions
- Selected results
  - Trade
  - U.S. crops
  - U.S livestock
- Uncertainties



# Background

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# Background for long-term projections

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- **10 year annual projections for agriculture**
  - Covers major U.S. and international agricultural markets
- **Projections, not forecasts**
  - Conditional, long-run scenario
  - Neutral assumptions for macroeconomic conditions, agricultural policy, weather
- **Prepared by USDA interagency committees**
  - Composite of models & judgment-based analysis
- **Start with November *WASDE* report**



# Projections Overview

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# Overview:

## Two parts to each set of projections

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- Short- to medium-term adjustments to current market conditions
  - Lower agricultural commodity prices
  - Supply response for both crop and livestock sectors
- Longer term market developments
  - Long-term supply and demand factors



# Overview:

## Two parts to each set of projections

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- Short- to medium-term adjustments to current market conditions
  - Lower agricultural commodity prices
  - Supply response for both crop and livestock sectors
- Longer term market developments
  - Long-term supply and demand factors
- Implications
  - Prices projected to bottom out over next several years and then increase





# Overview:

## Key factors underlying long-term projections

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### Demand

- Developing country population and economic growth lead to increased food demand
- Biofuel developments
  - Expansion slows
  - Continued demand for biofuel feedstocks

### Supply

- Yield growth slowing



# Key Assumptions—Macroeconomy

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# Macroeconomic assumptions:

## Growth in developing economies important for agriculture

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GDP growth, percent

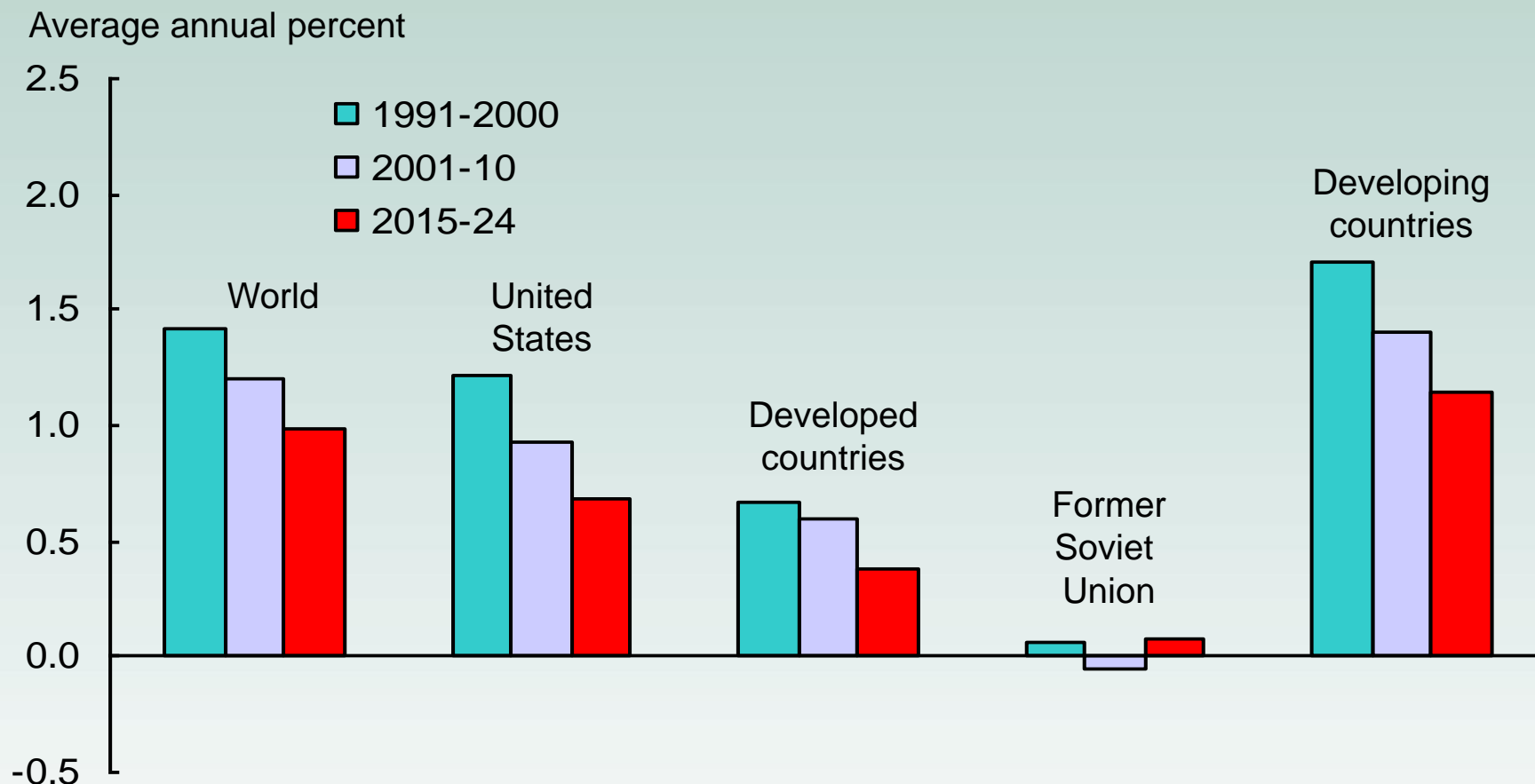


Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Population growth continues to slow: Strongest growth in developing countries



Source: U.S. Department of Commerce, U.S. Census Bureau.

*USDA Agricultural Projections to 2024, February 2015.*



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# Key Assumptions—Biofuels

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# Biofuels

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- U.S. ethanol use constrained by
  - Declining gasoline consumption
  - 10-percent blend wall
- U.S. biodiesel mandate assumed fixed at 1.28 billion gallons per year
- EU biofuel use slows



# Key Assumptions—Yields

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# Global crop yield growth generally lower than past 40 years

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Commodity	Exponential annual growth rates		
	1970-1990	1990-2010	2014-2024
percent			
Coarse grains	1.7	1.8	1.0
Corn	2.0	1.7	1.0
Wheat	2.5	1.0	0.6
Rice	2.3	0.9	0.6
Oilseeds	1.9	1.7	0.8
Soybeans	1.3	1.2	1.0
Cotton	2.2	1.9	1.3

Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Selected Results

## Commodity trade projections

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# Developing economies drive global agricultural trade growth

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## Share of global import growth from developing countries, 2015 to 2024

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### Commodity

percent

Wheat	89
Rice	98
Coarse grains	102
Soybeans	104
Cotton	100

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Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Selected trade projection highlights

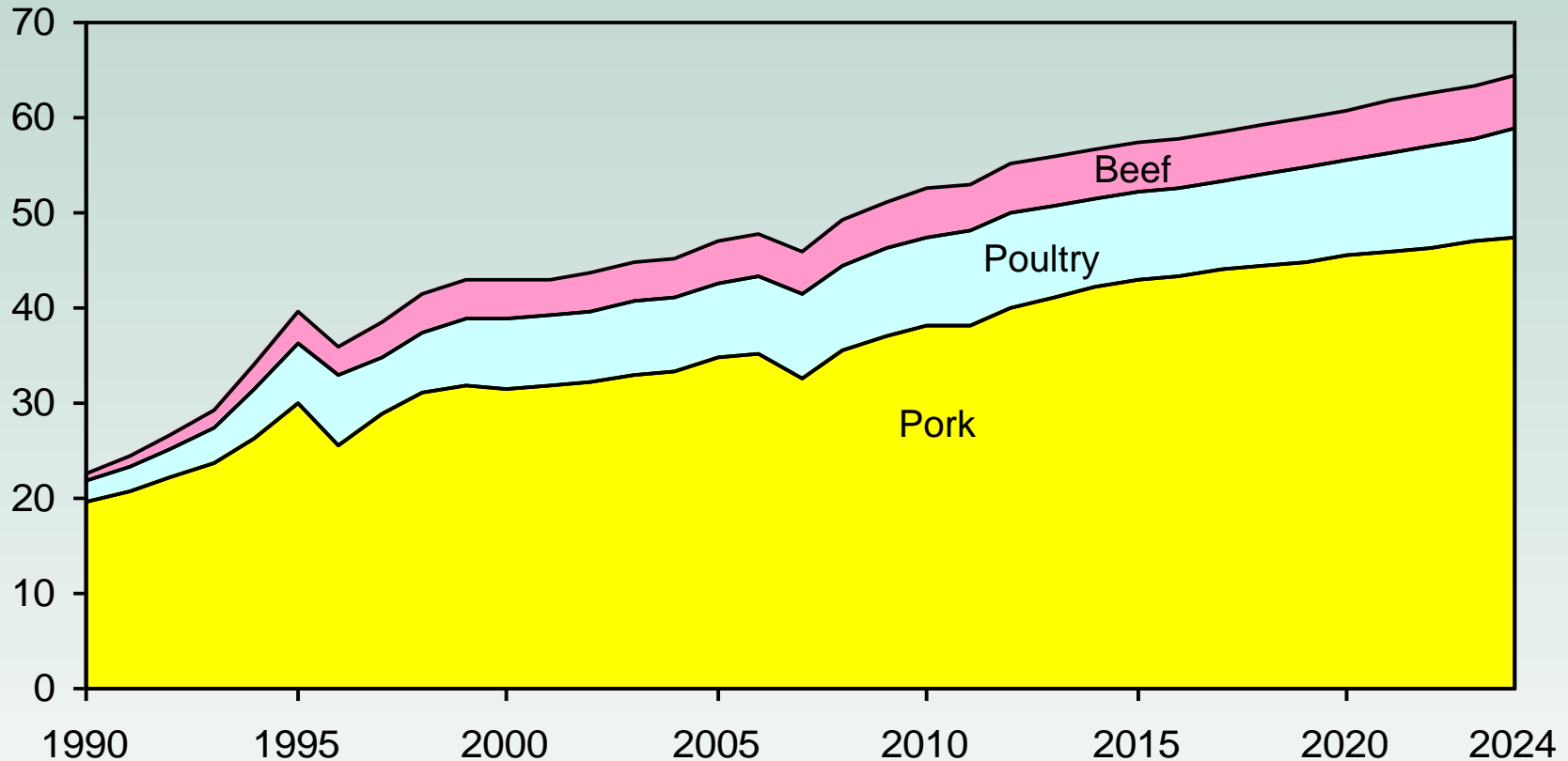
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- China has a strong presence in trade for many agricultural commodities
- U.S. agricultural sector continues to face trade competition from South America



# China's per capita meat consumption continues to grow

Kilograms per person



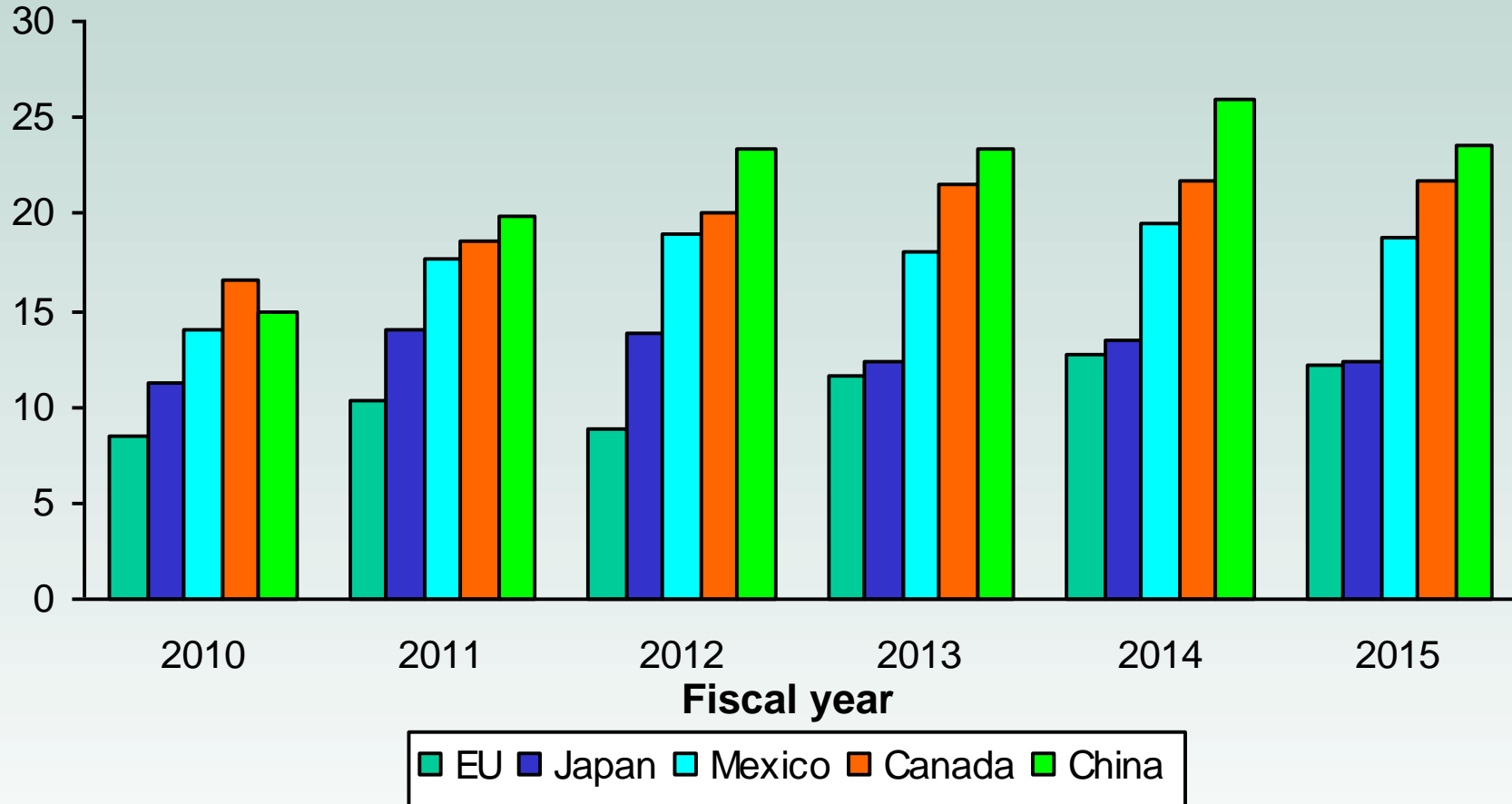
Source: Preliminary international results underlying *USDA Agricultural Projections to 2024*, February 2015.



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# China has been the top destination for U.S. agricultural exports in recent years

Billion dollars



Source: USDA, Foreign Agricultural Service and Economic Research Service.



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# China agricultural policies, selected provisions

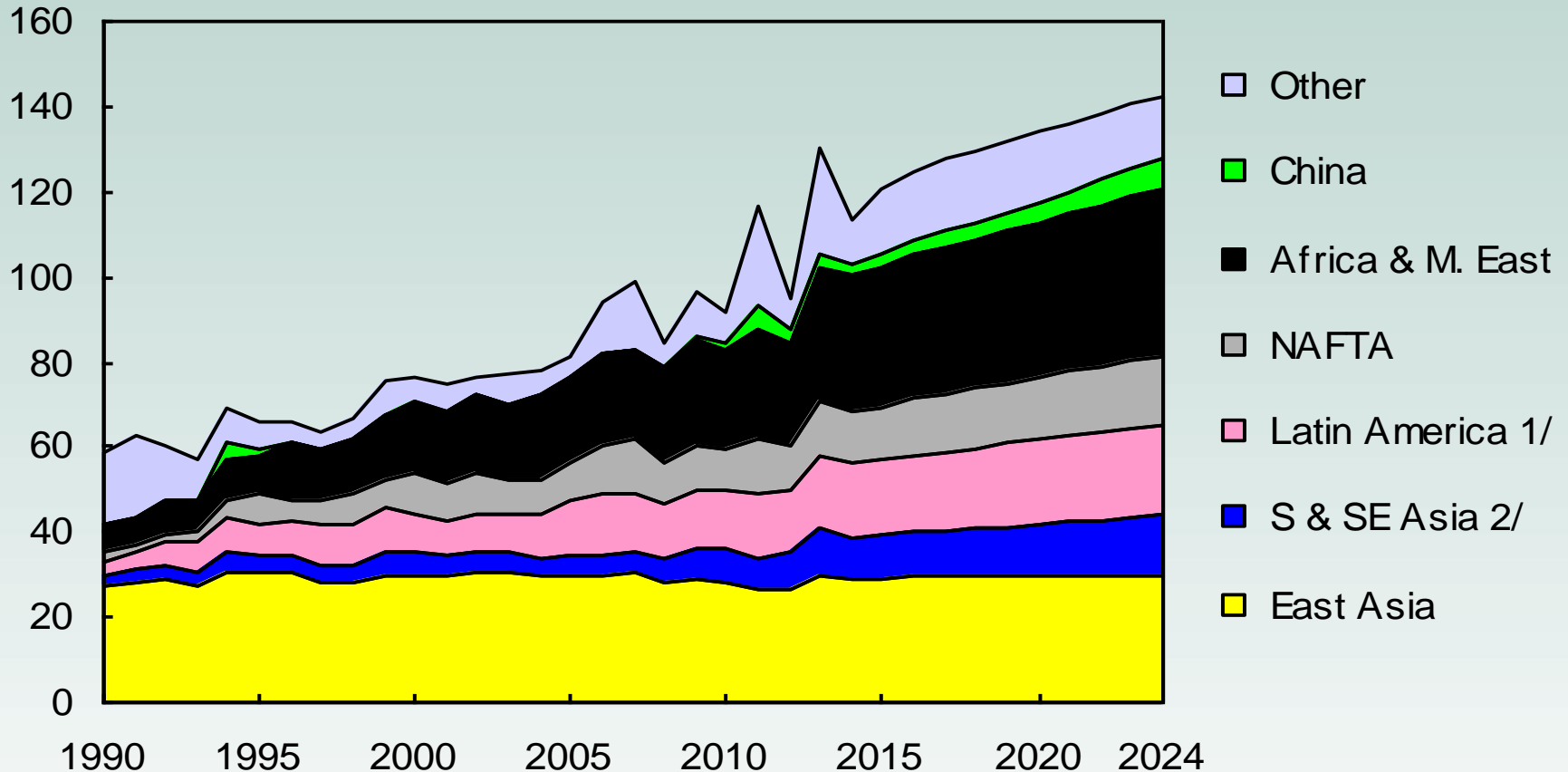
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- China emphasizes the production of grains over soybeans
- Policies favor the imports of soybeans over imports of soybean meal and soybean oil to use a large oilseed crushing capacity



# Global corn imports

Million metric tons



1/ Excludes Mexico which is part of NAFTA. 2/ Includes Oceania.

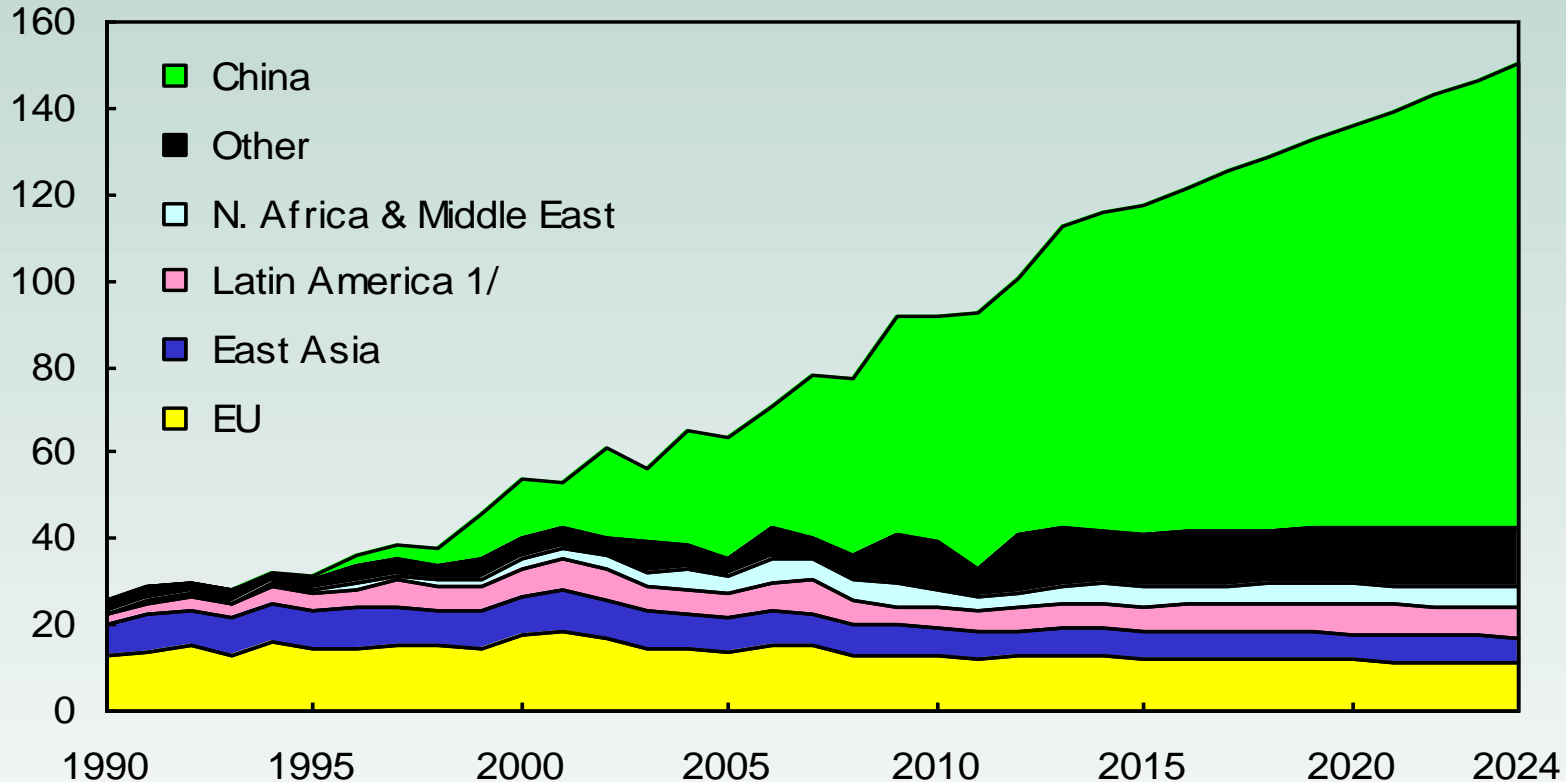
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Global soybean imports

Million metric tons



1/ Includes Mexico.

Source: *USDA Agricultural Projections to 2024*, February 2015.

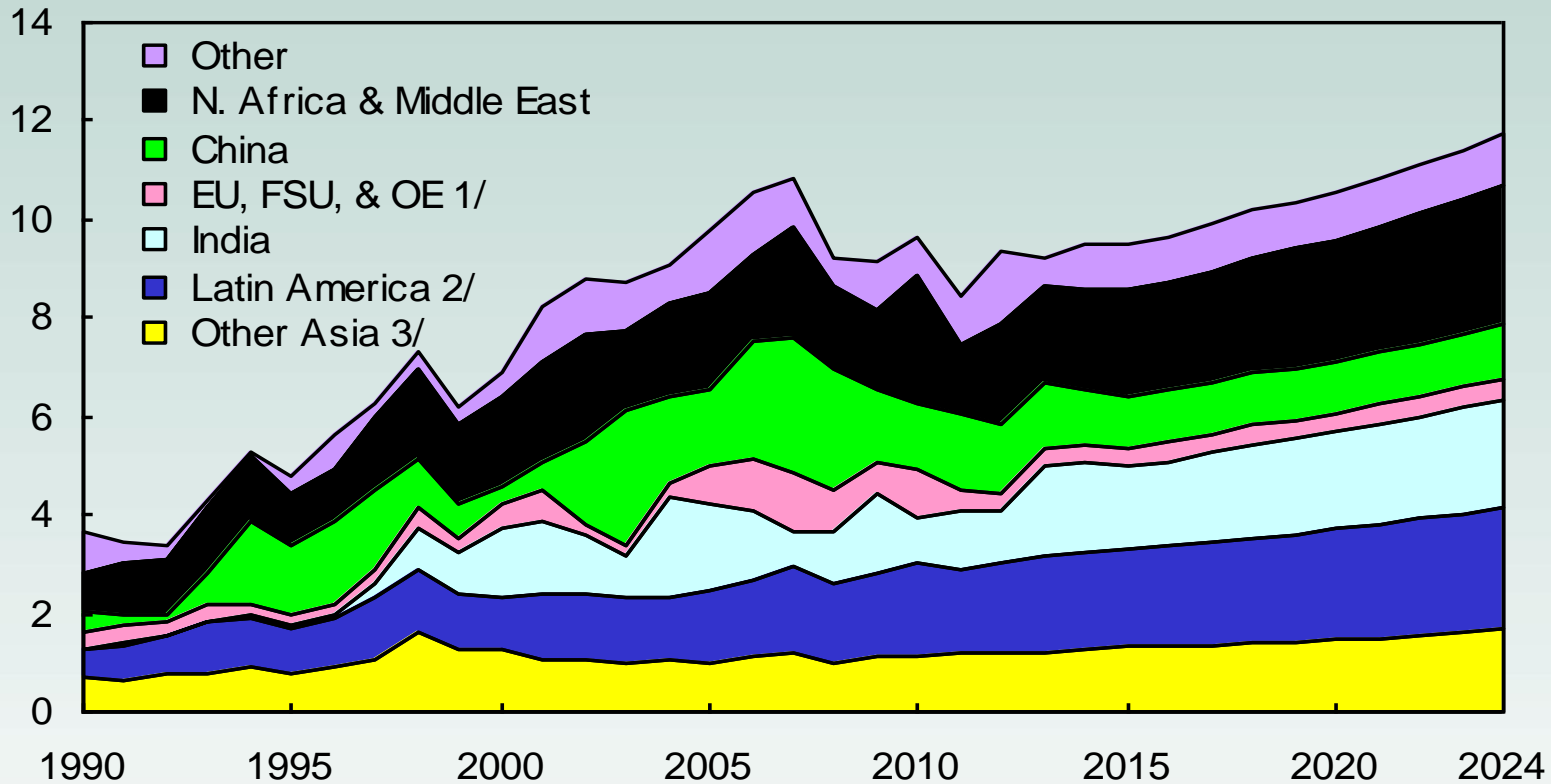


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# Global soybean oil imports

Million metric tons



1/ European Union, former Soviet Union, and other Europe.

2/ Includes Mexico. 3/ Asia excluding India and China.

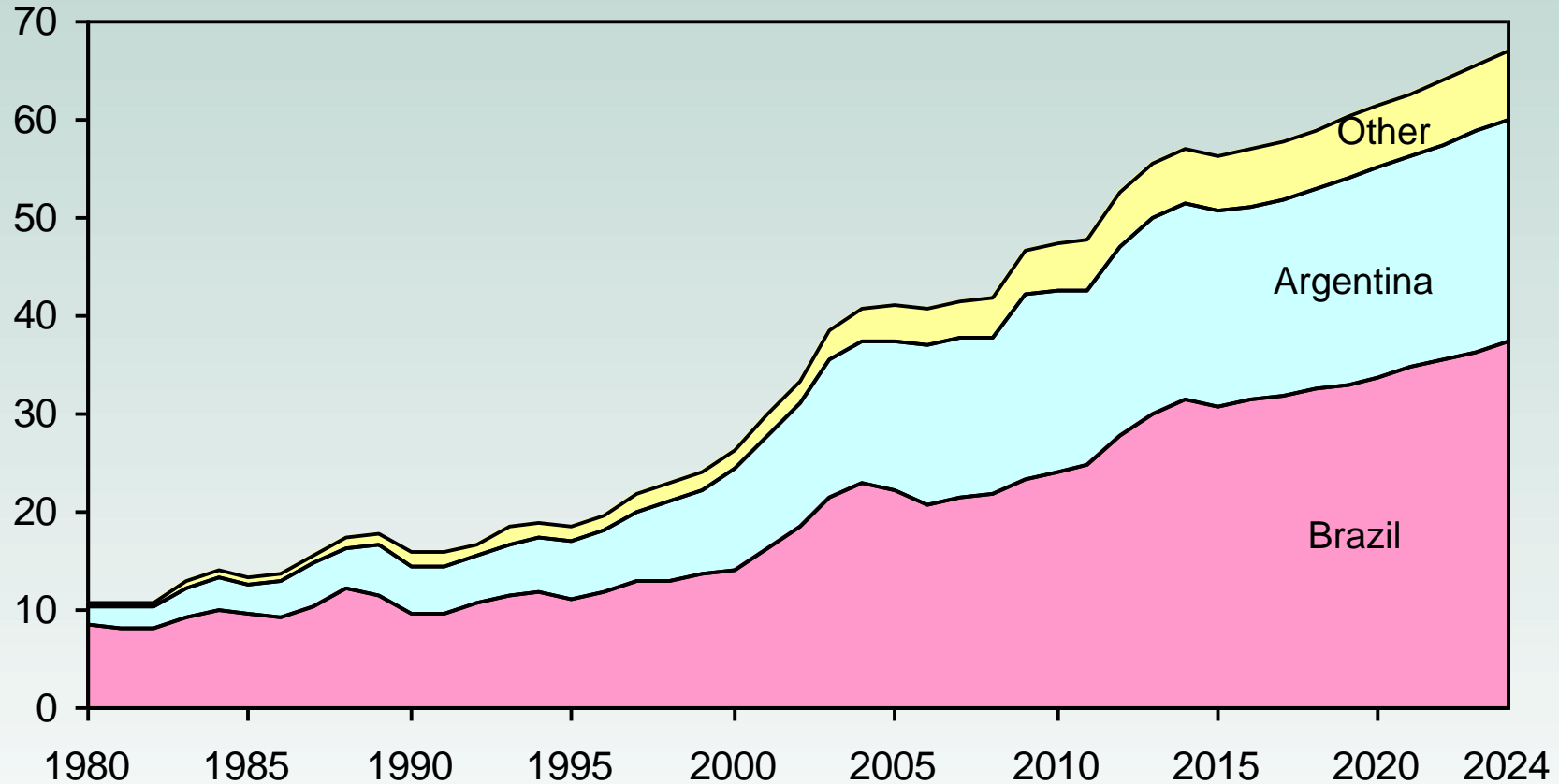
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Area harvested, South America: Soybeans

Million hectares



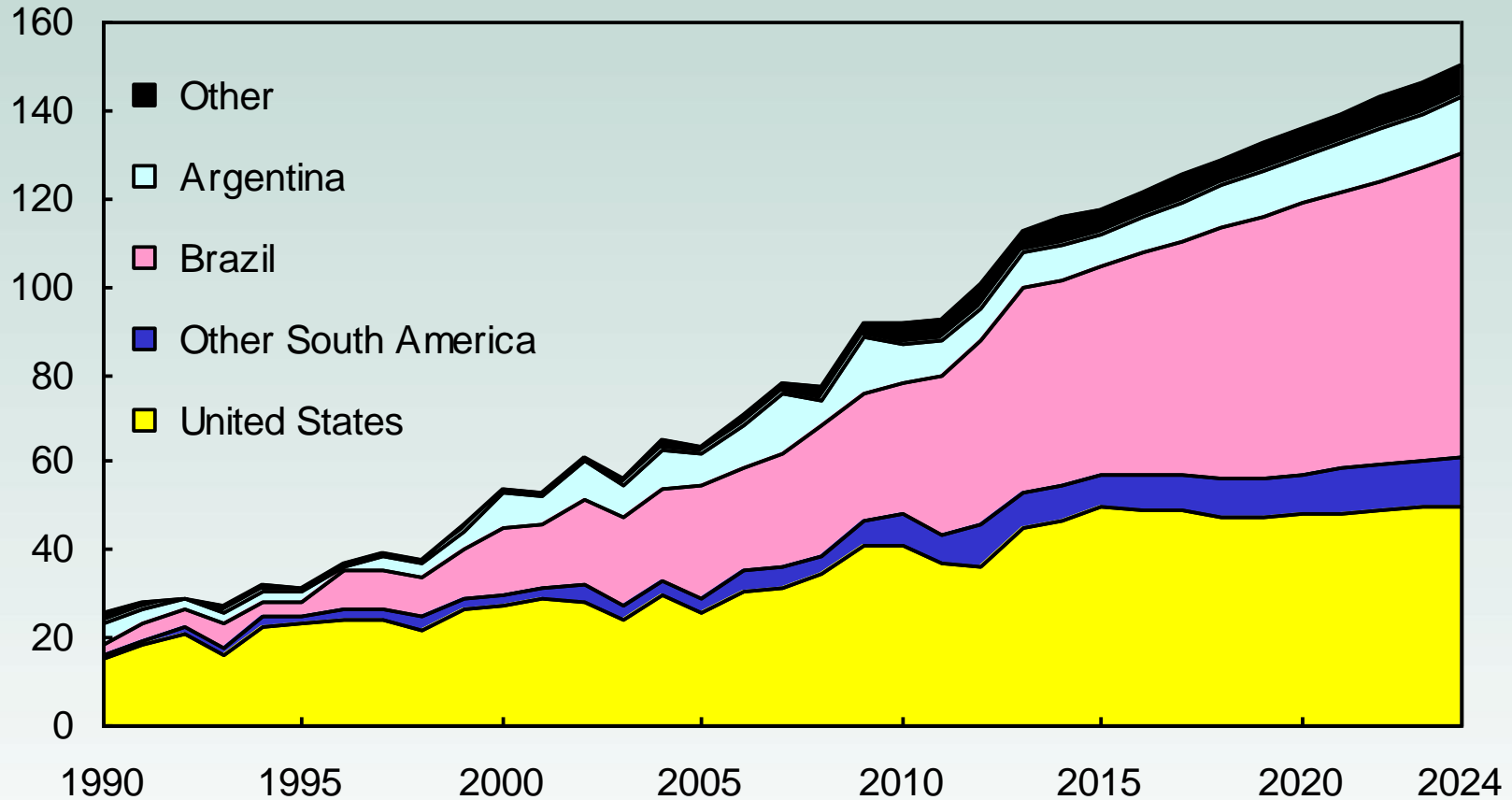
Source: Preliminary international results underlying *USDA Agricultural Projections to 2024*, February 2015.



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# Global soybean exports

Million metric tons



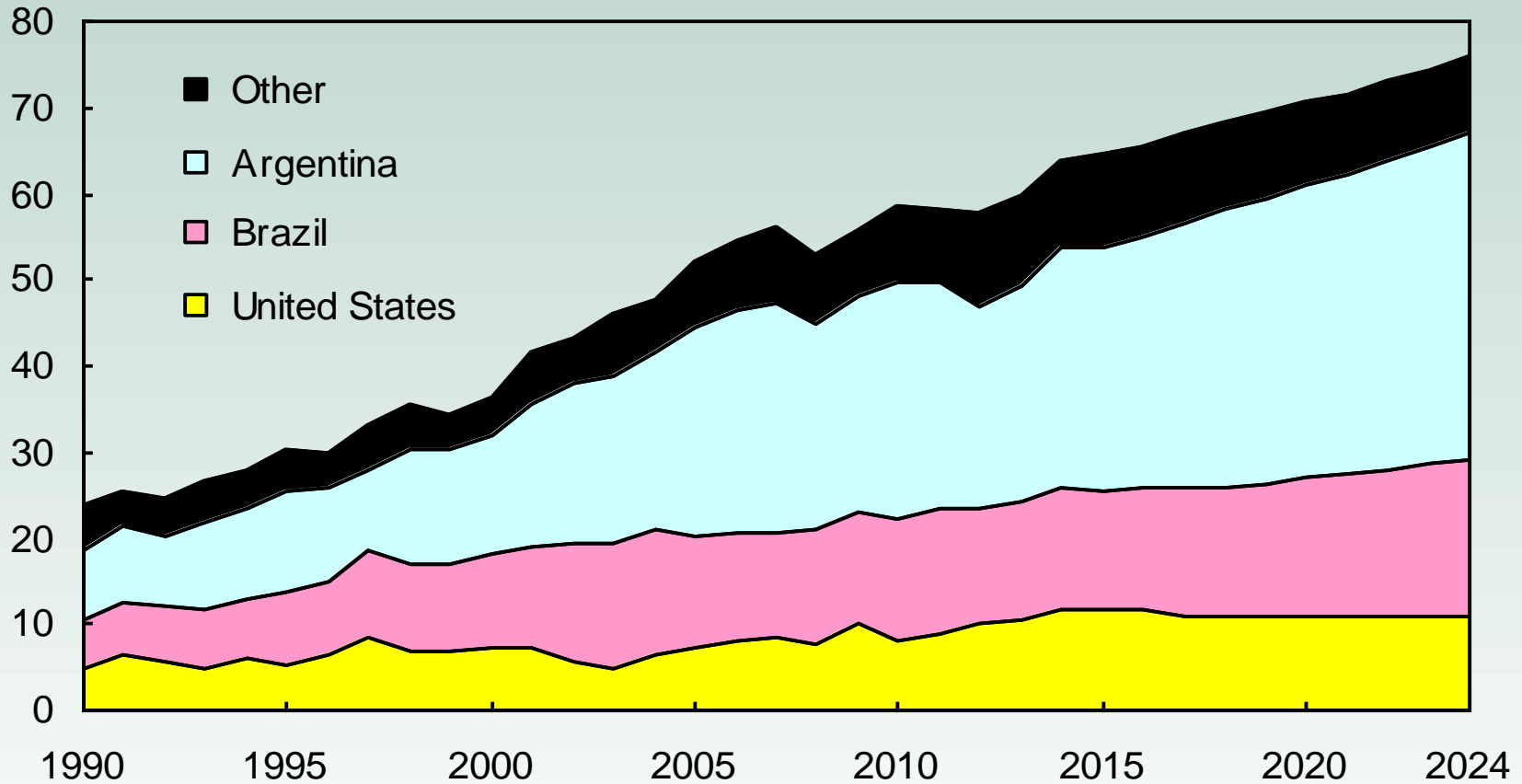
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Global soybean meal exports

Million metric tons



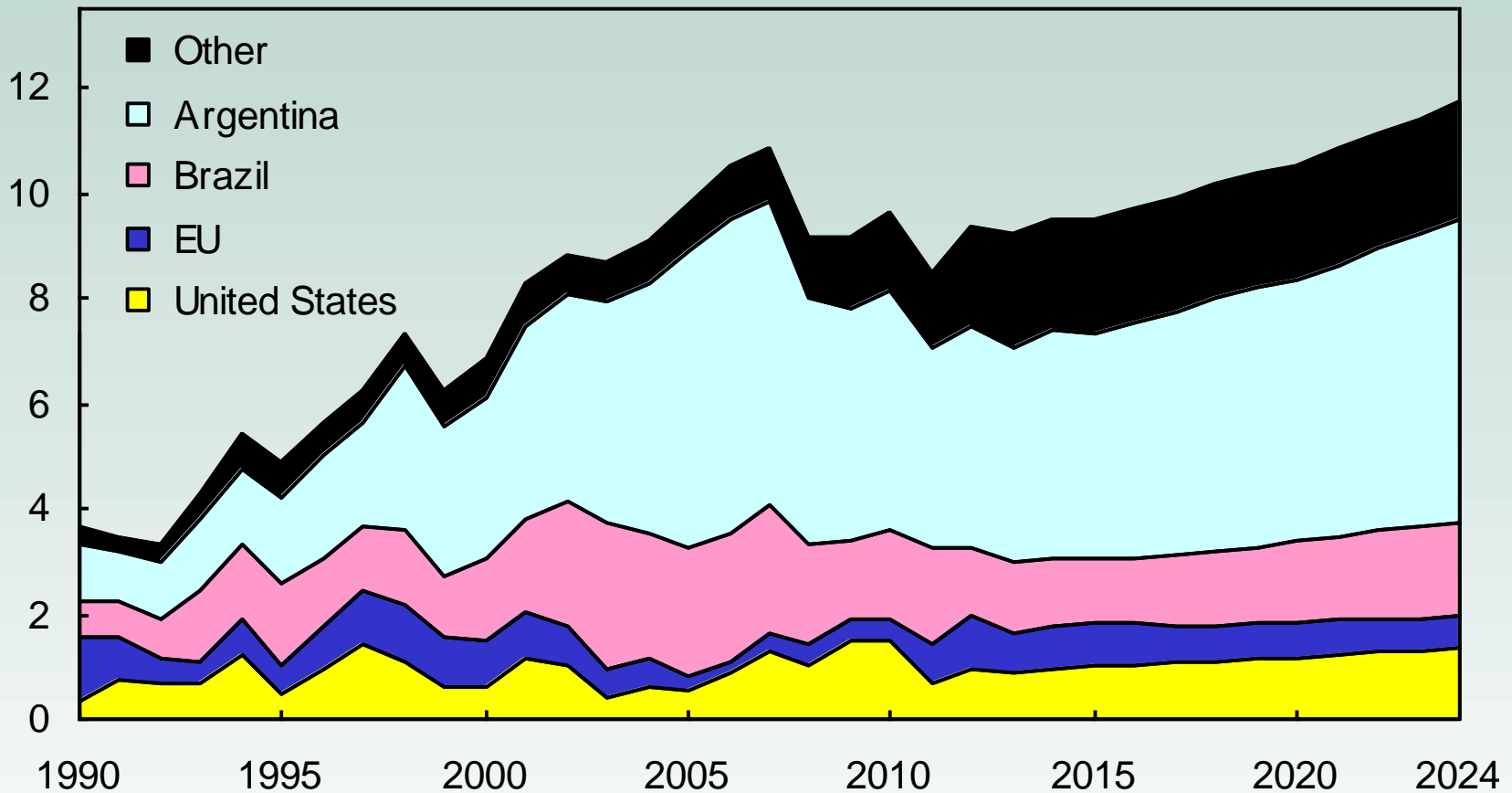
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Global soybean oil exports

Million metric tons



Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Selected Results

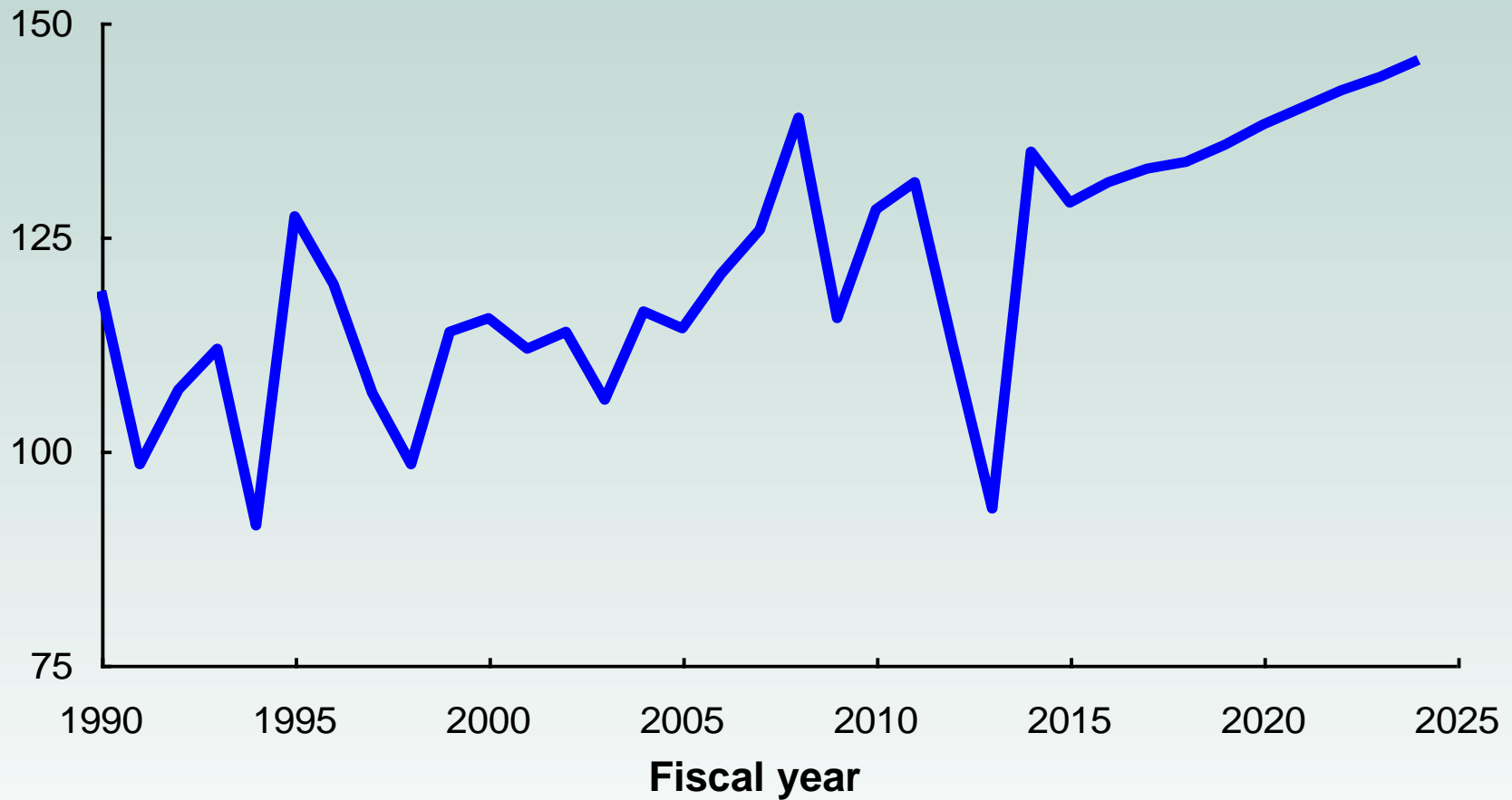
## U.S. crop projections

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# U.S. agricultural exports, bulk volume

Million metric tons



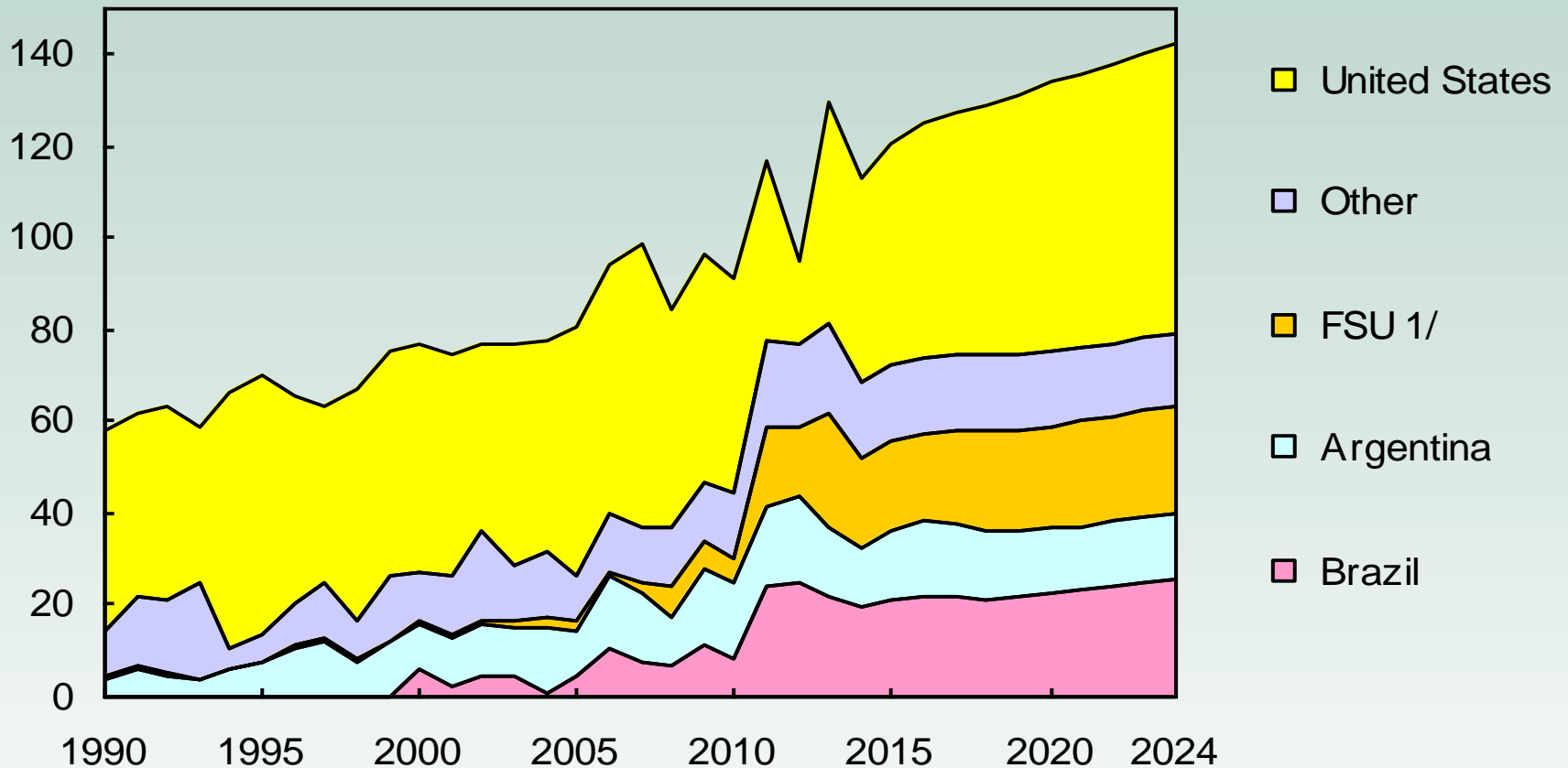
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Global corn exports

Million metric tons



1/ Former Soviet Union.

Source: *USDA Agricultural Projections to 2024*, February 2015.



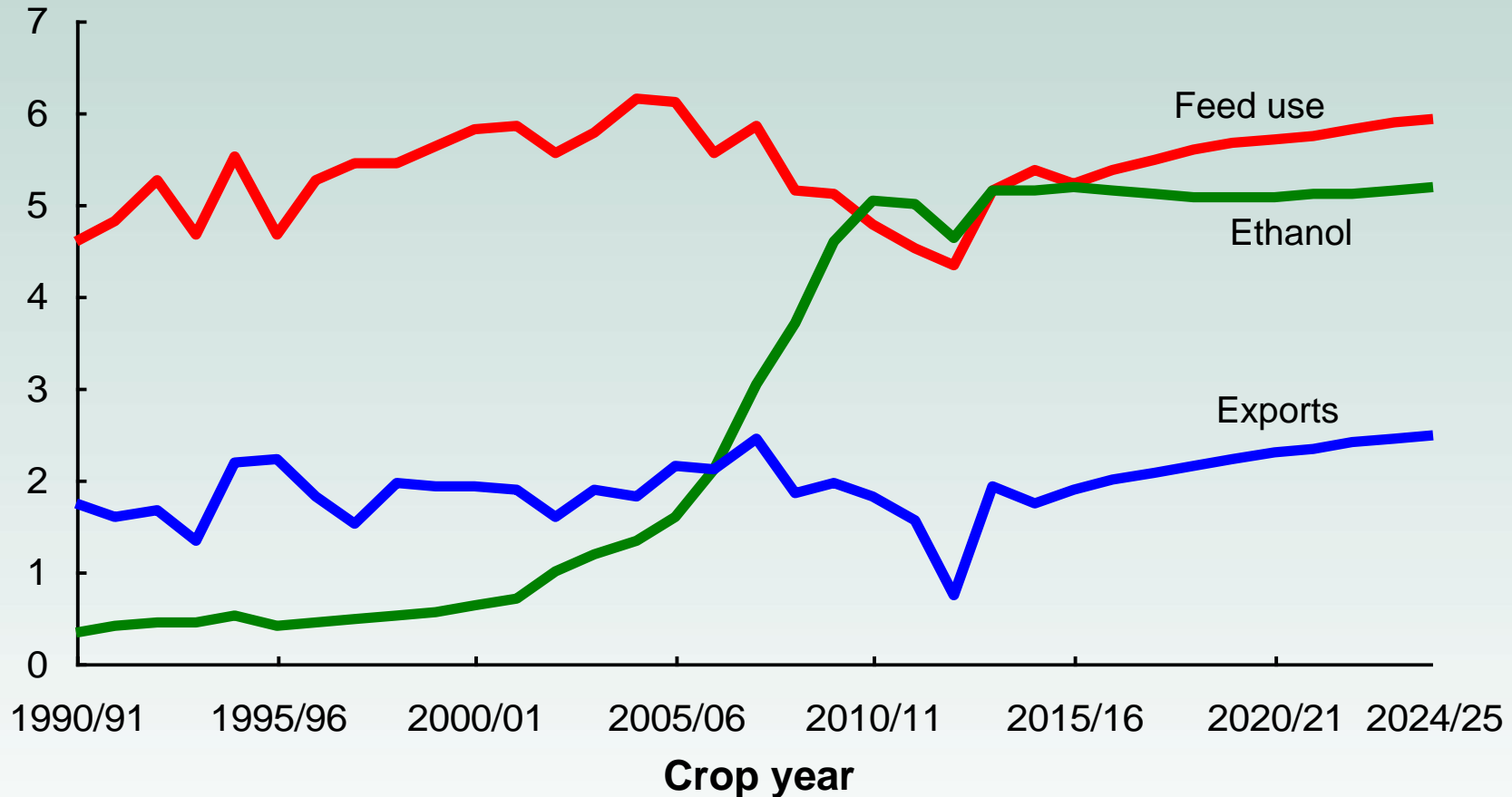
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# U.S. corn use projections:

## Corn-based ethanol shows little change

Billion bushels



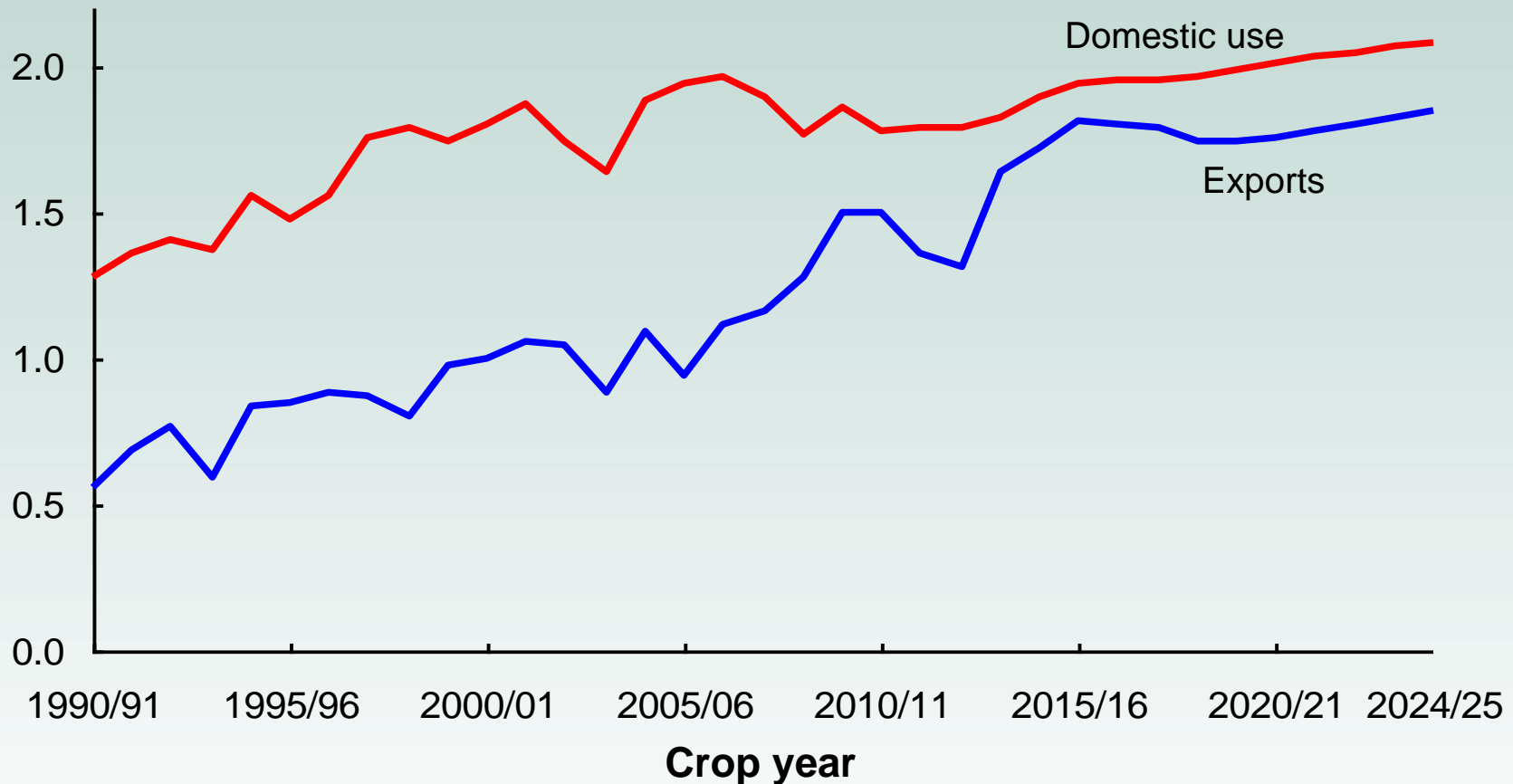
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# U.S. soybean use projections

Billion bushels



Source: *USDA Agricultural Projections to 2024*, February 2015.

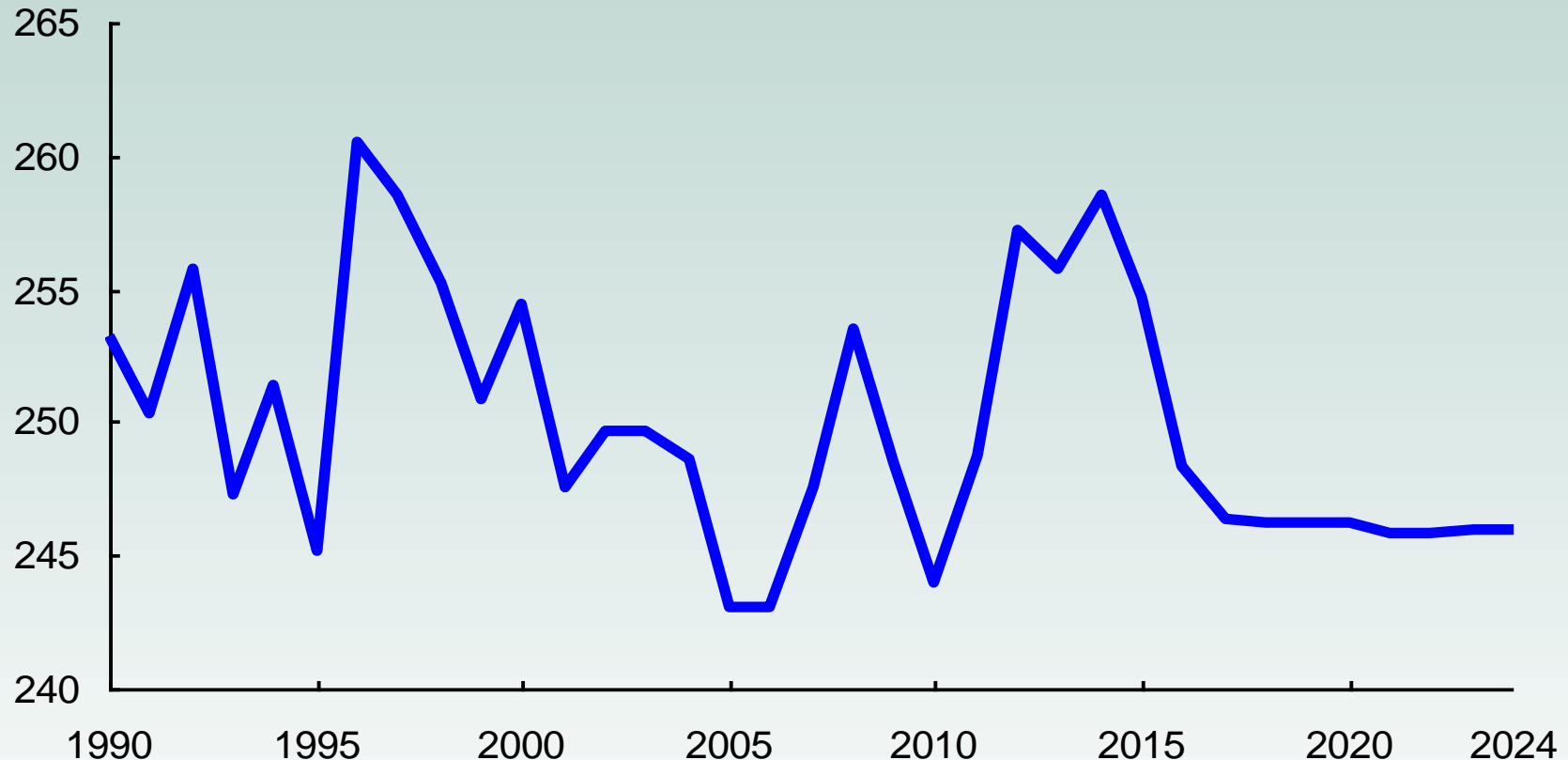


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# U.S. planted area: Eight major crops<sup>1</sup>

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Million acres



<sup>1</sup> The eight major crops are corn, sorghum, barley, oats, wheat, rice, upland cotton, and soybeans.

Source: *USDA Agricultural Projections to 2024*, February 2015.

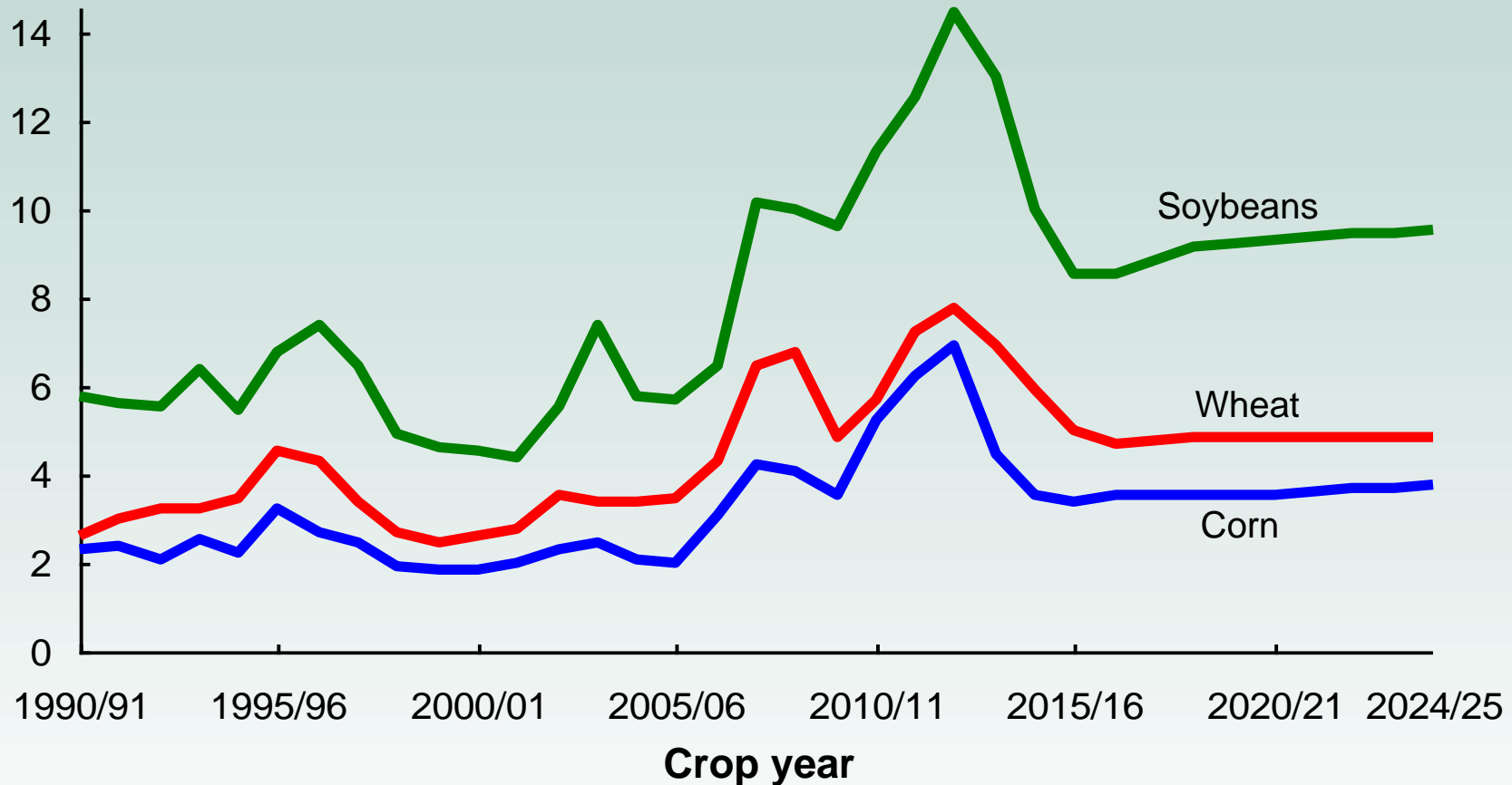


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Prices reflect global demand & continued biofuel use:  
Retreat from recent highs, but remain above historical averages

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\$/bushel



Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Selected Results

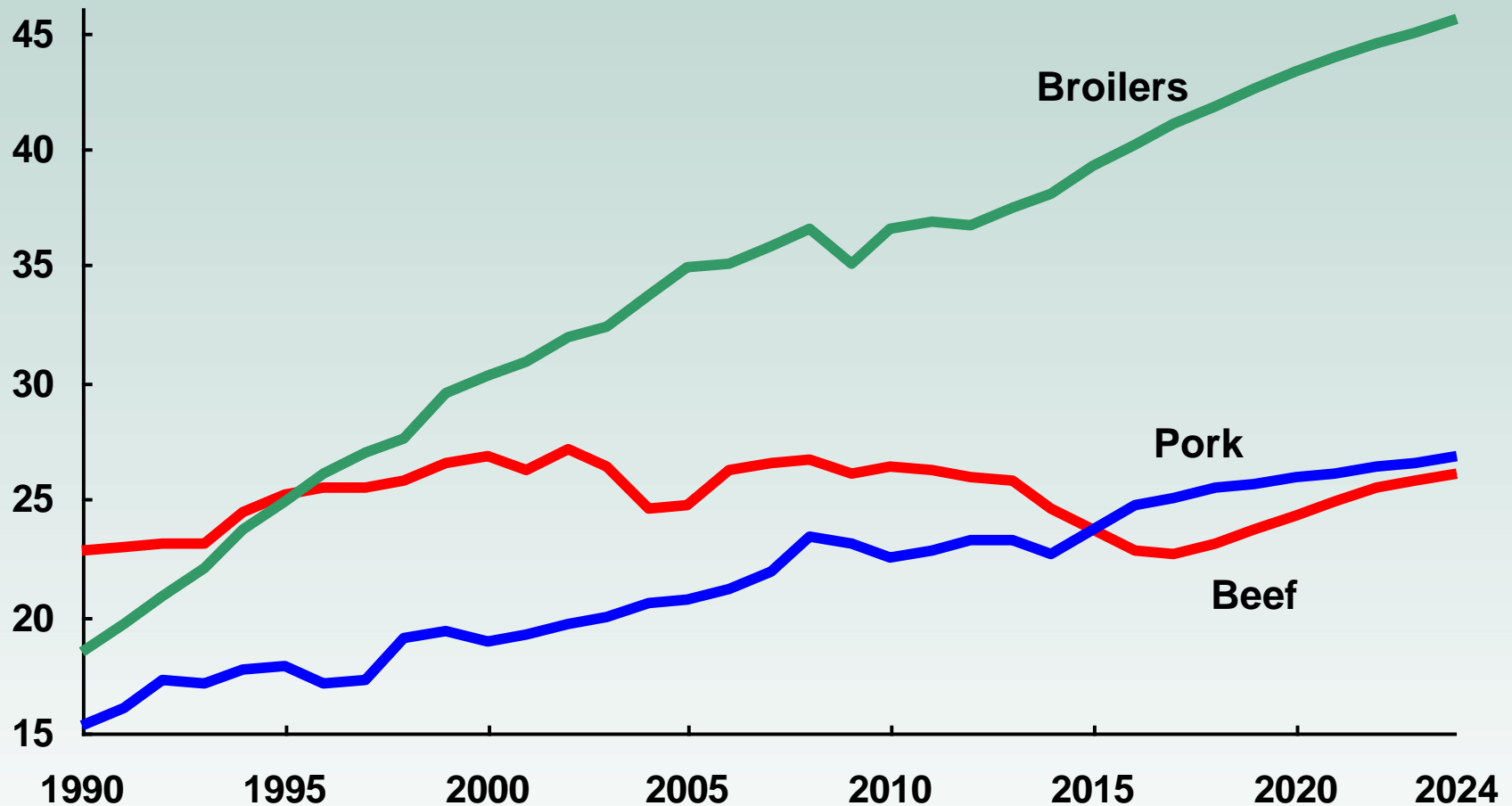
## U.S. livestock projections

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# U.S. livestock sector responds to lower feed prices: Production increases

Billion pounds



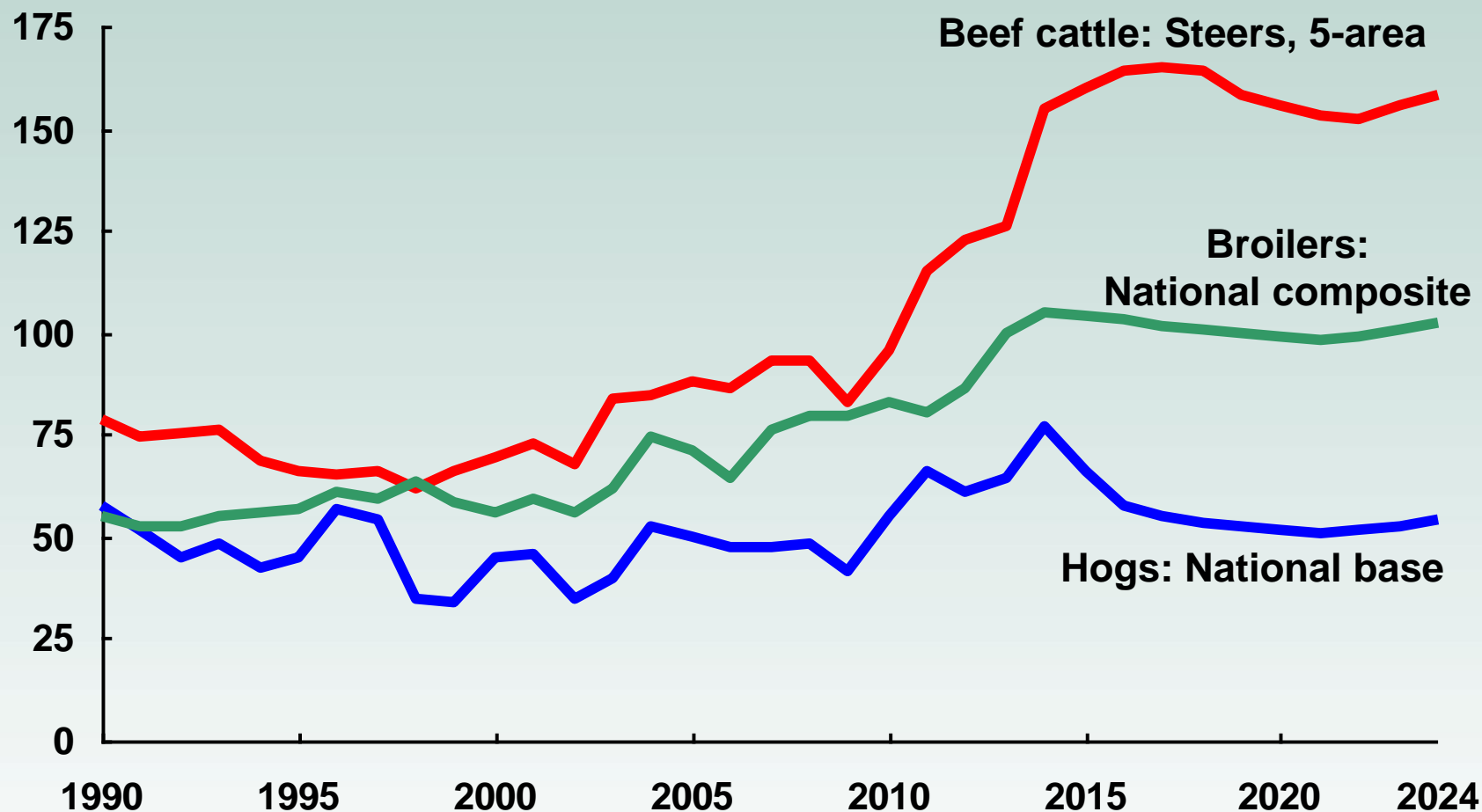
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# U.S. livestock prices

\$ per hundredweight, nominal, U.S. markets



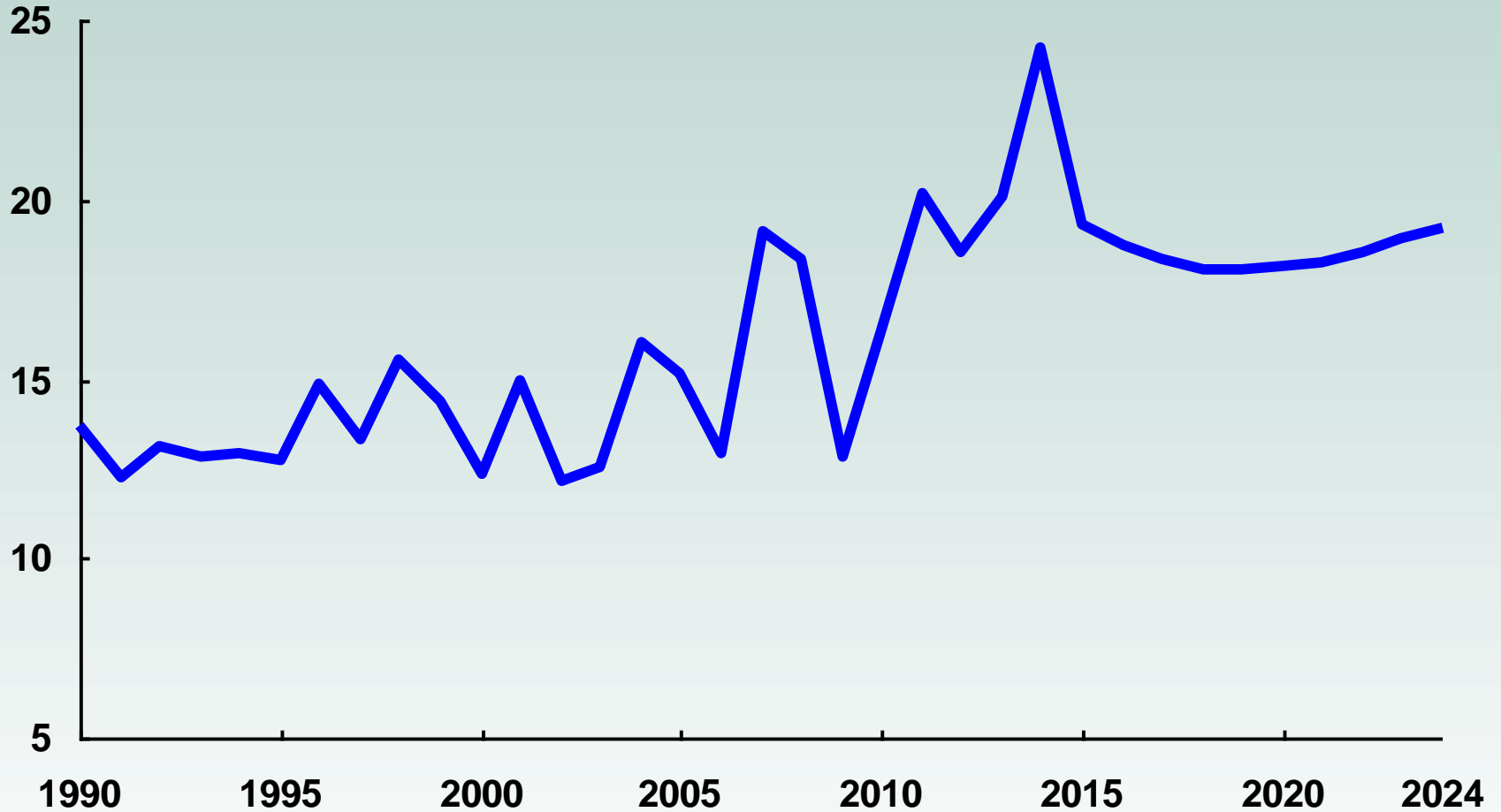
Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Milk prices

Dollars per hundredweight



Source: *USDA Agricultural Projections to 2024*, February 2015.



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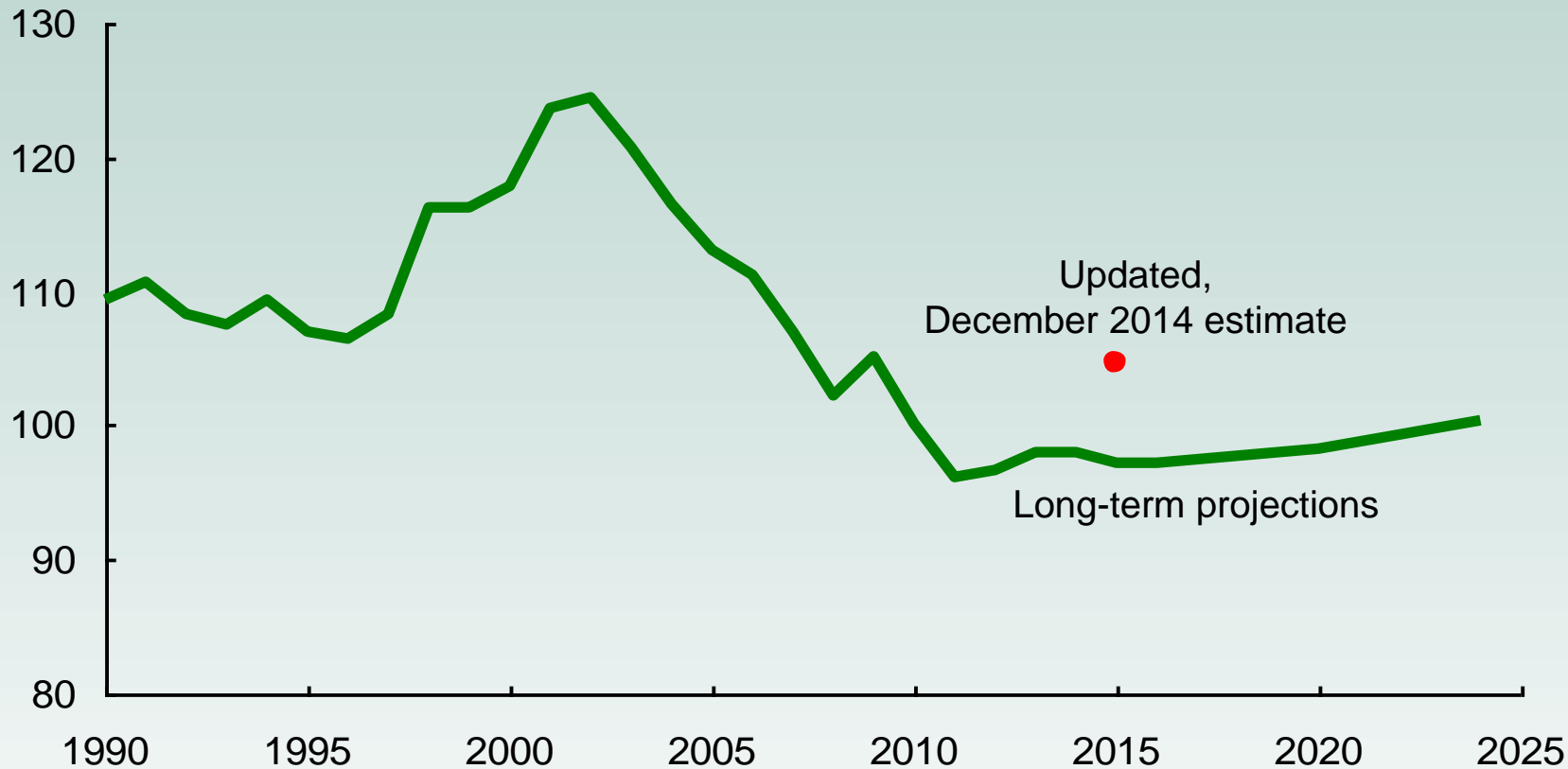
# Uncertainties

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# U.S. dollar value strengthening

Index values, 2010=100



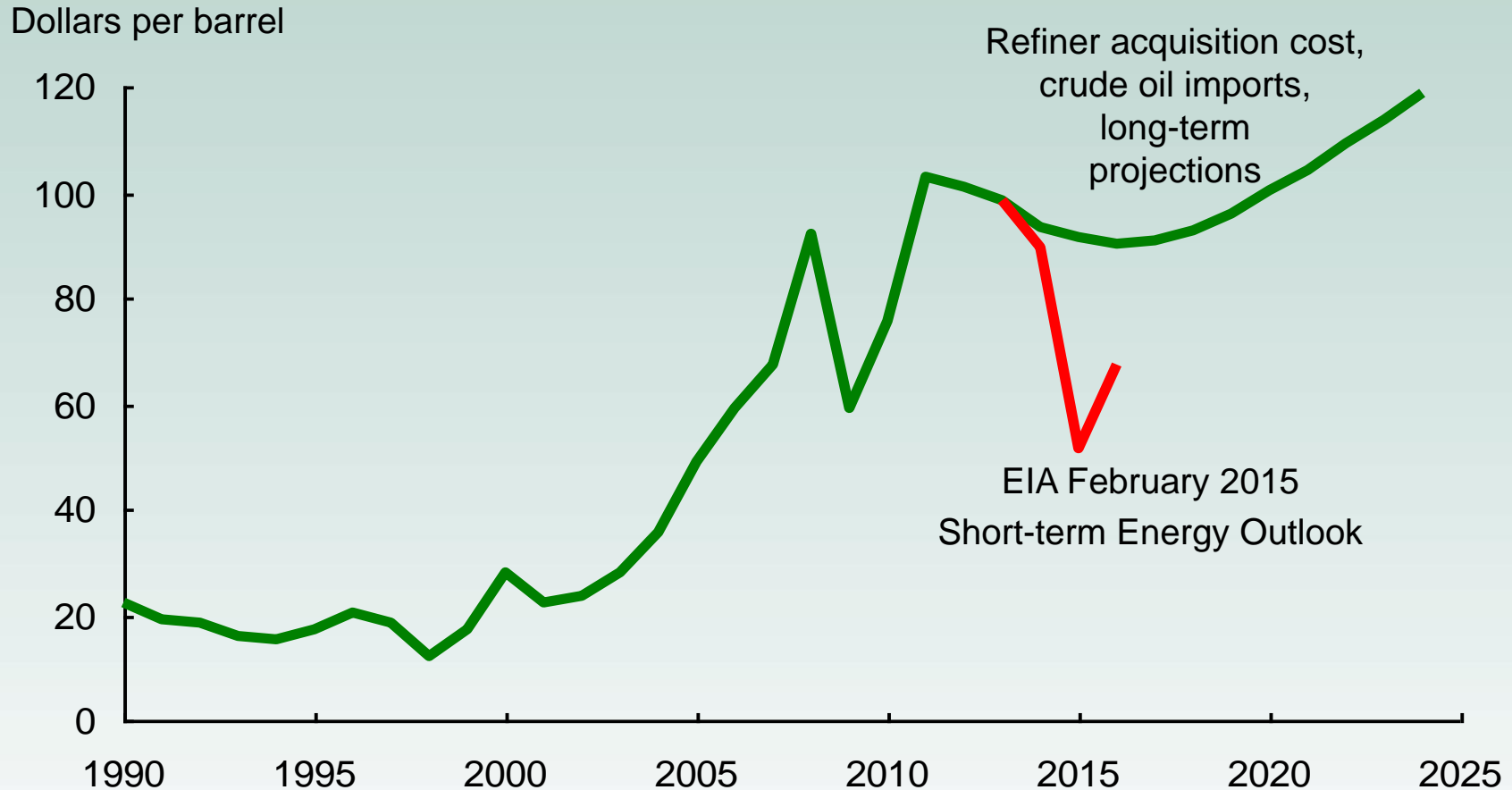
Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights, based on 192 countries.

Source: *USDA Agricultural Projections to 2024*, February 2015.



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# U.S. crude oil prices: Sharply lower in near term



Source: *USDA Agricultural Projections to 2024*, February 2015.



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# Summary

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# Summary

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## **Near term market adjustments to lower prices**

## **Longer term demand factors**

- Global economic growth and population increases, particularly in developing countries, provide the foundation for gains in demand for agricultural products
- Continued global biofuel production adds to agricultural demand

## **Longer term supply factors**

- Slower yield growth

## **Prices**

- Crop prices retreat from recent highs before rising in the projections
- Meat and dairy prices also reflect increased production, in response to lower feed prices

