

# Global Agricultural Situation

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**GLOBAL  
INSIGHT**

# Presentation Overview

- State of the US economy
- The global macroeconomic situation
- Impacts of the global recession on meat consumption
- World livestock and crop demand growth
- Technology
- Global land use
- Risks for commodity prices

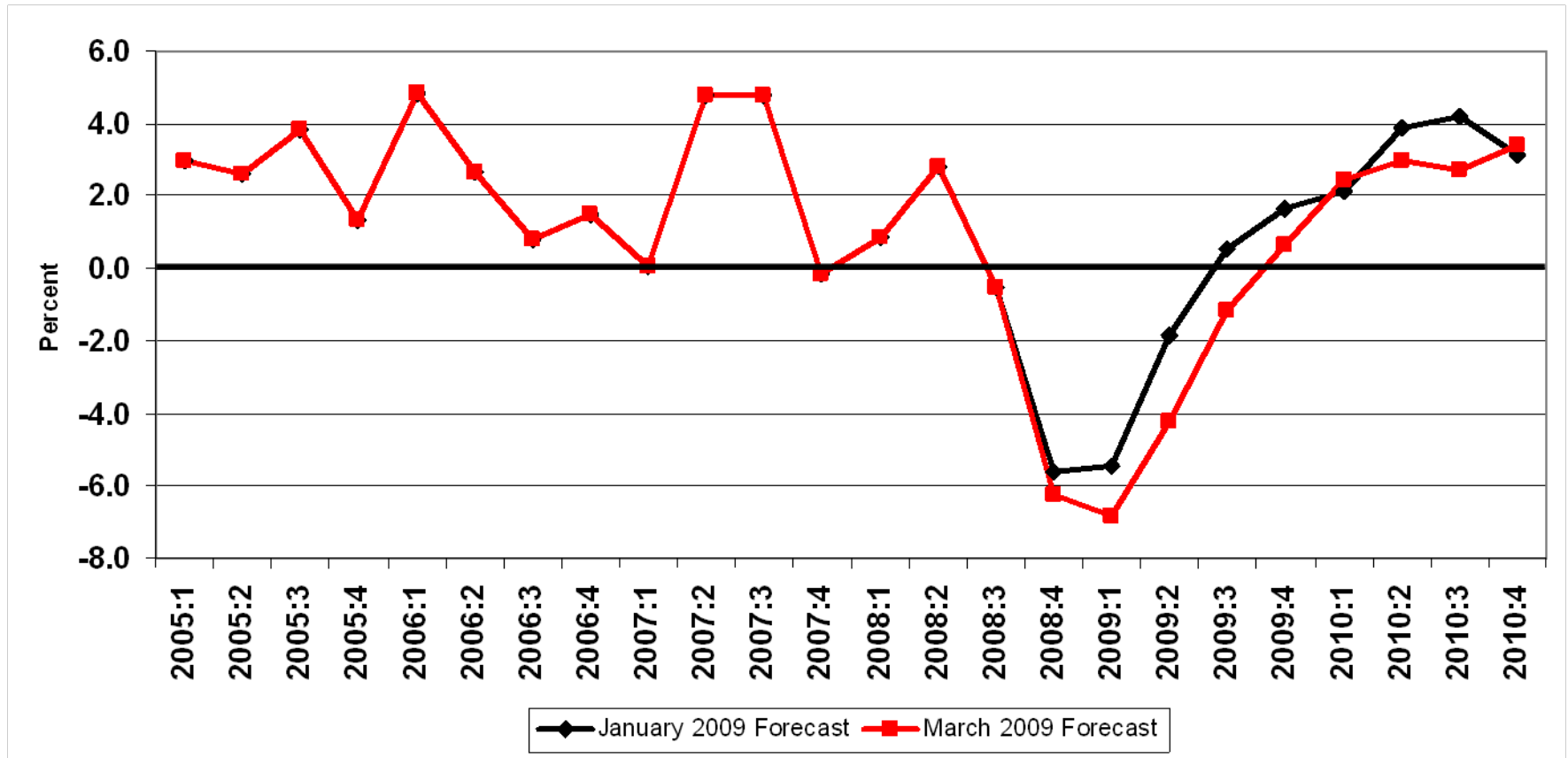
# How bad is the recession?

- US GDP Growth
  - In 2008, Qtr 4, down 6.2 percent
  - In 2009, Qtr 1, projected to be down 6.8 percent
  - Overall, 2009 GDP is expected to be down 3.7 percent
- US Unemployment
  - In 2008, Qtr 4, 6.9 percent
  - In 2009, Qtr 1, project to be 8.1 percent
  - Overall, 2009 unemployment is expected to be 9.2 percent
  - A total of 3.6 million jobs have been lost since the cyclical peak in December 2007, and total job losses will likely reach 7 million

# When will the economy recover?

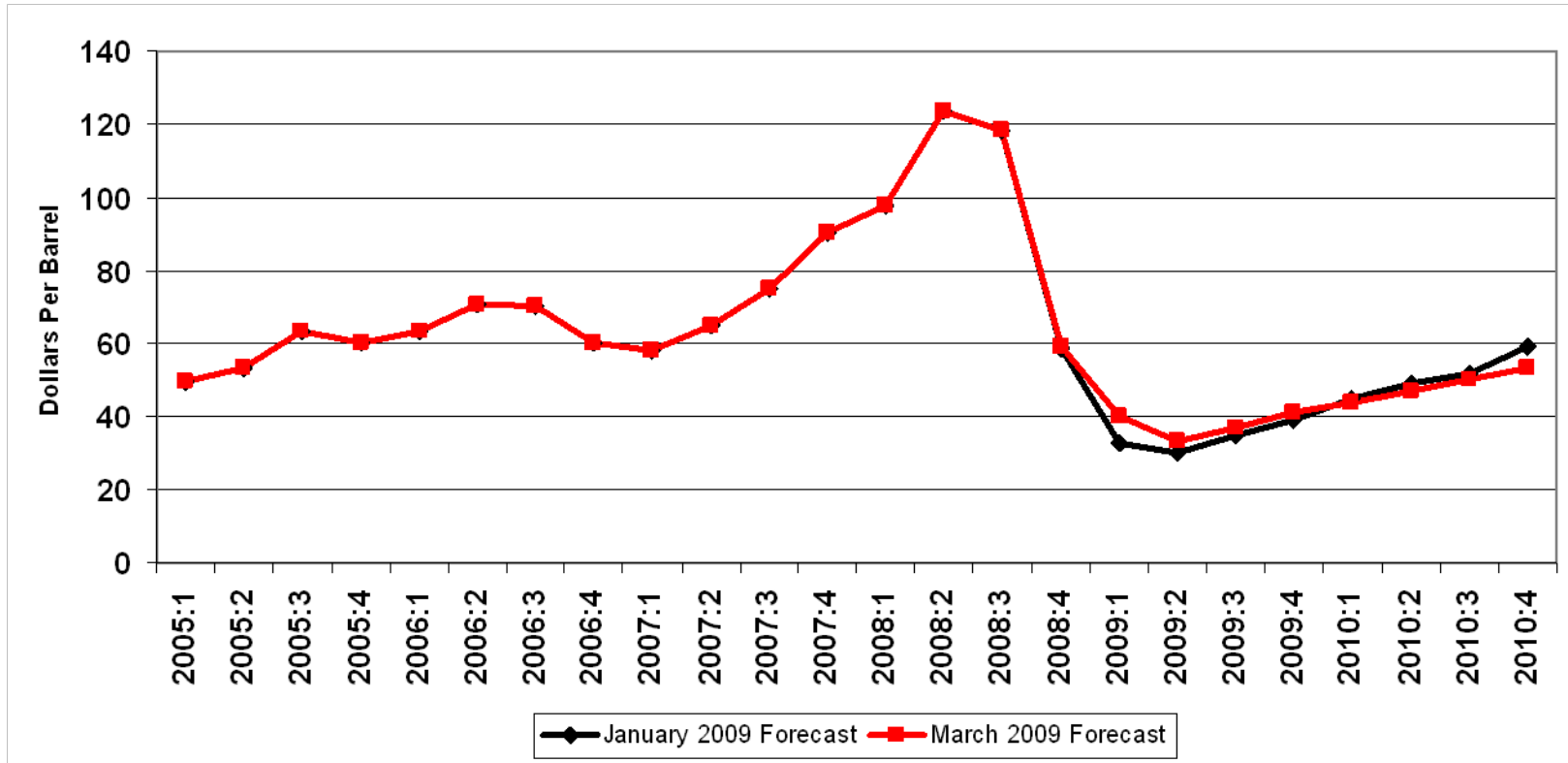
- Recovery begins in 2009, Qtr 4, with
  - Easing of credit conditions
  - Fiscal stimulus finally begins to kick in
    - Infrastructure improvements (1.5 – 2 multiplier effect)
    - Relief for state and local governments (limit job losses)
    - Tax cuts and transfer payments (.5 - .75 multiplier effect)
  - Trouble Asset Relief Program (TARP) will need a second kick, the toxic assets are still on the balance sheets of banks and banks are still not lending and foreclosures continue.
  - Buy American campaigns are not part of the strategy because they invite retaliation at a time when the American economy needs export-led growth.

# Real US GDP Growth Rates

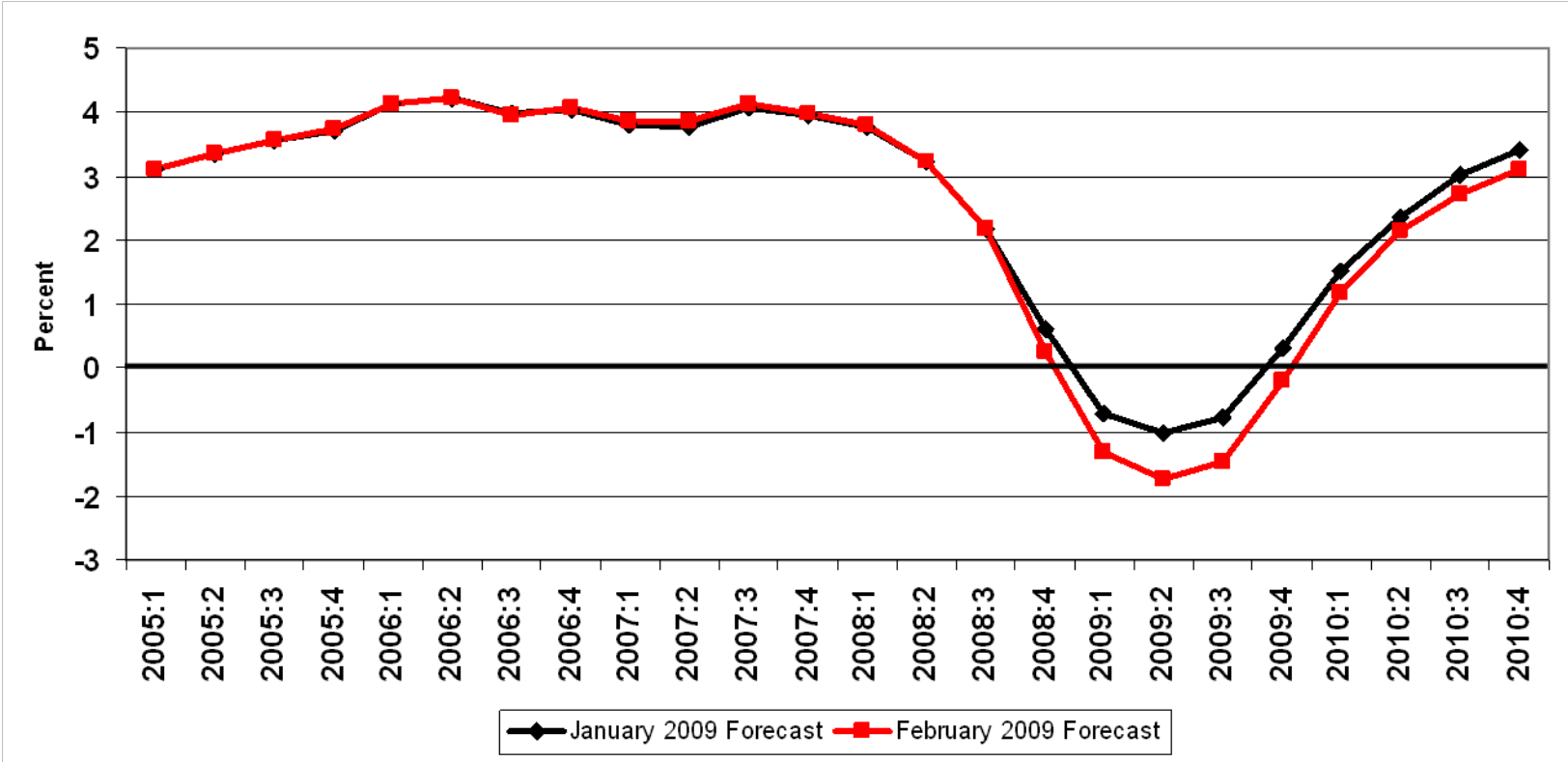


# Crude Oil Price

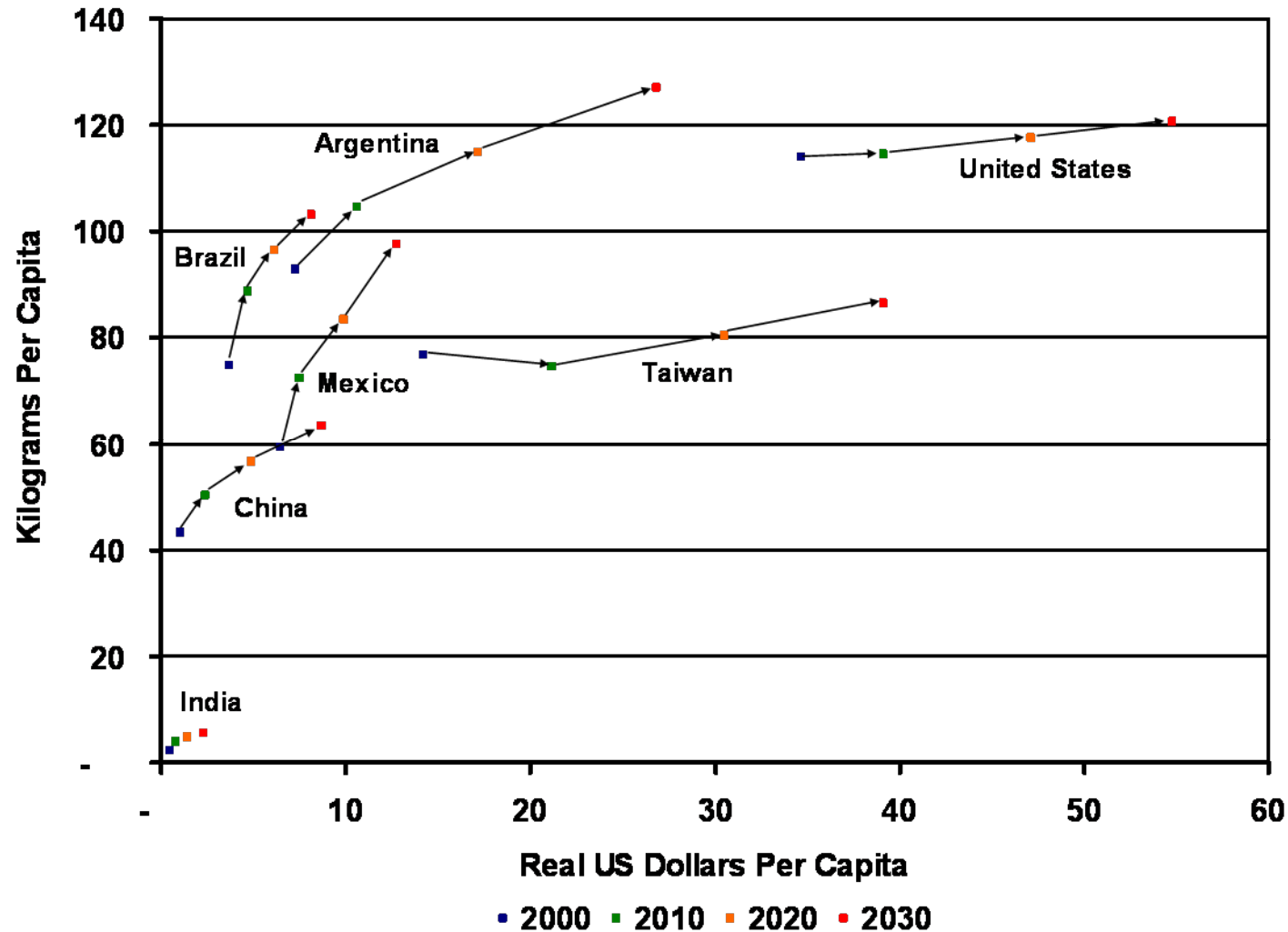
## West Texas Intermediate Price



# World GDP Growth

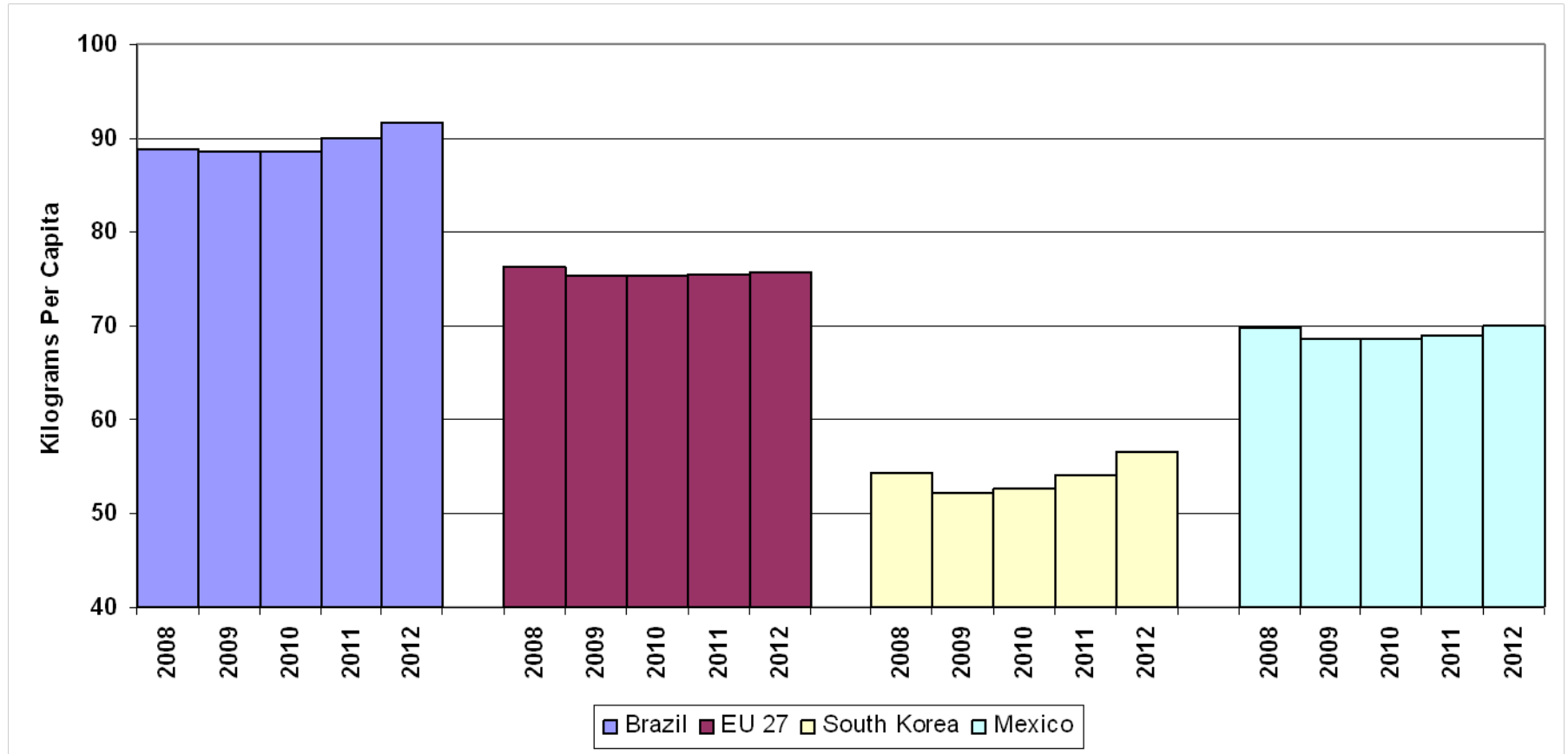


# Per Capita Income and Meat Consumption



# Per Capita Meat Consumption

Selected Countries



# Issues for Global Agriculture

- Biofuels
  - US challenges – profitability, the blending wall, GHG's & Indirect Land Use, cellulosic ethanol
  - Has the EU weaken its resolve on biofuels?
- Price Volatility
  - Low world stock levels
  - New sources of demand have tightened up excess production (at least in the near term)
  - Global economic uncertainty
  - Speculation

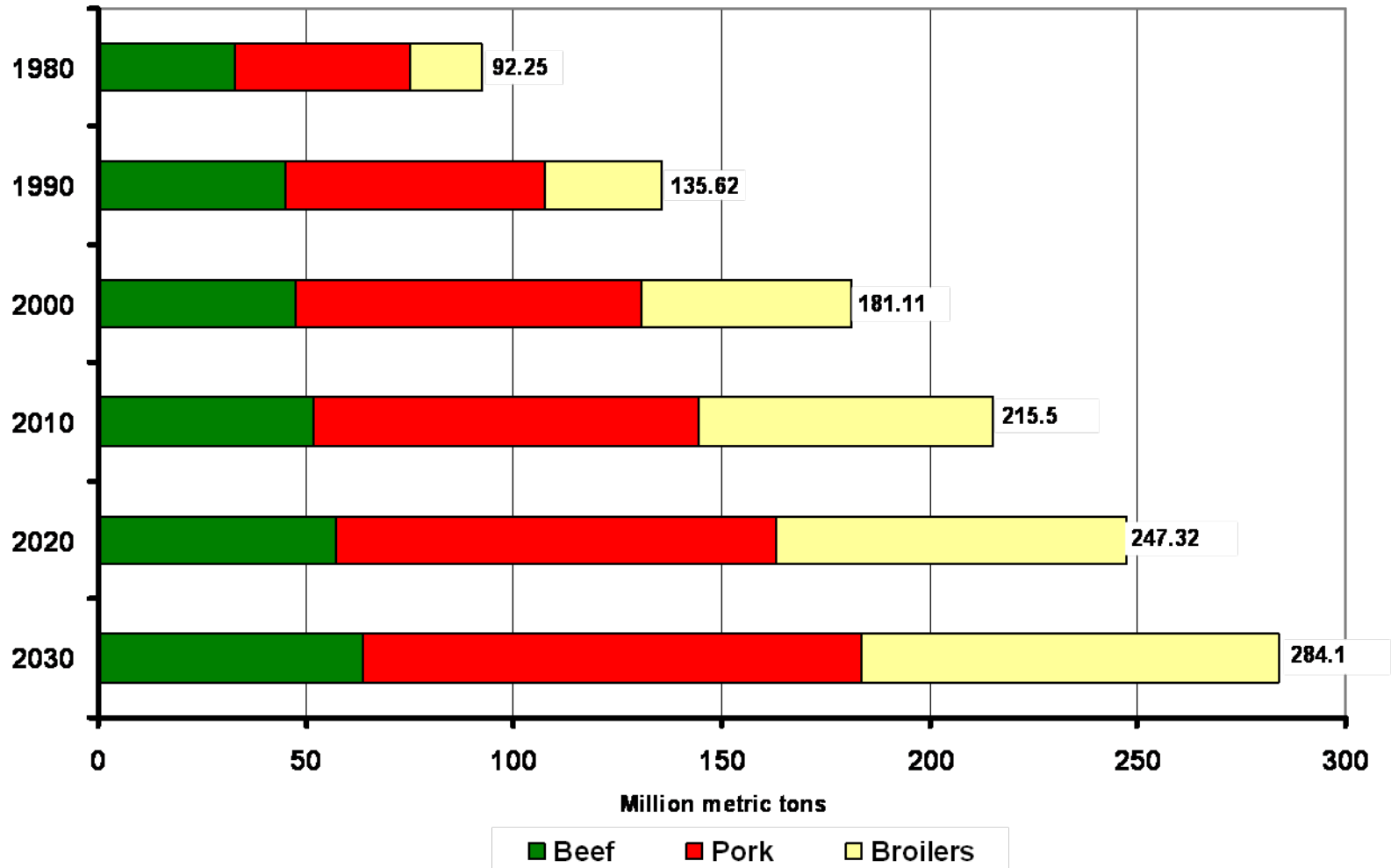
# Issues for Global Agriculture (continued)

- Technology in the pipeline
  - Corn
    - 8 way trait stacks (7.5% yield step)
    - drought tolerance (reduces yield variance and increases over all yield averages)
    - better nitrogen utilization (reduce nitrogen requirements by 40% for the same yield)
  - Soybeans
    - New varieties and RR 2™ (10% yield step)
    - Drought tolerance

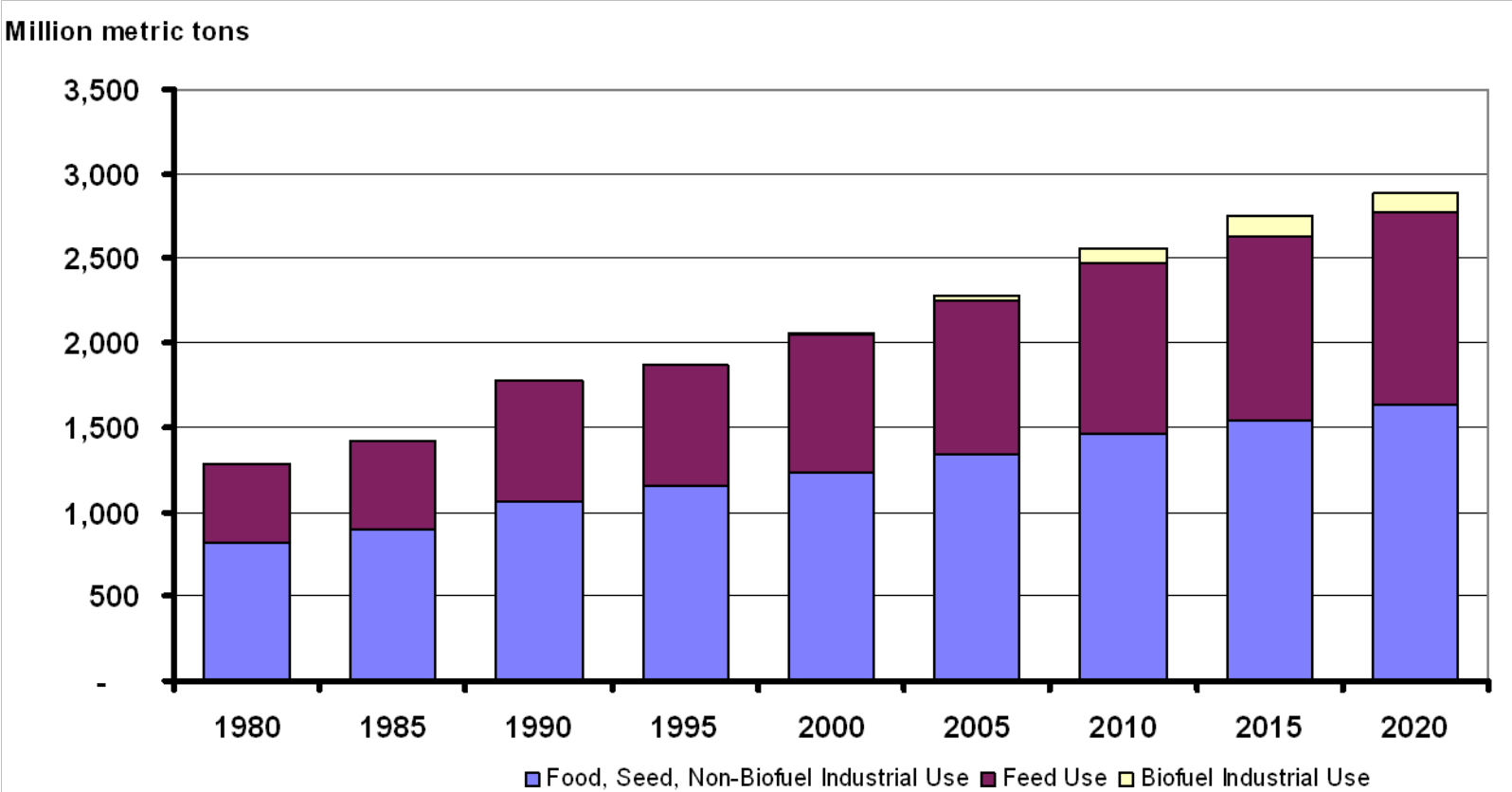
# Issues for Global Agriculture (continued)

- Profitability
  - Fertilizer and fuel price have begun to ease from the run up last fall but are still quite high.
  - Rental rates for farmland have skyrocketed and while there has been some easing recently
  - Seed costs are continuing to increase as technology companies seek to capture value for their new seed technology.
  - Crop prices have weakened considerably since July 2008
  - The squeeze on profitability is just beginning.

# Meat Consumption Growth



# Total World Demand by Major End Use

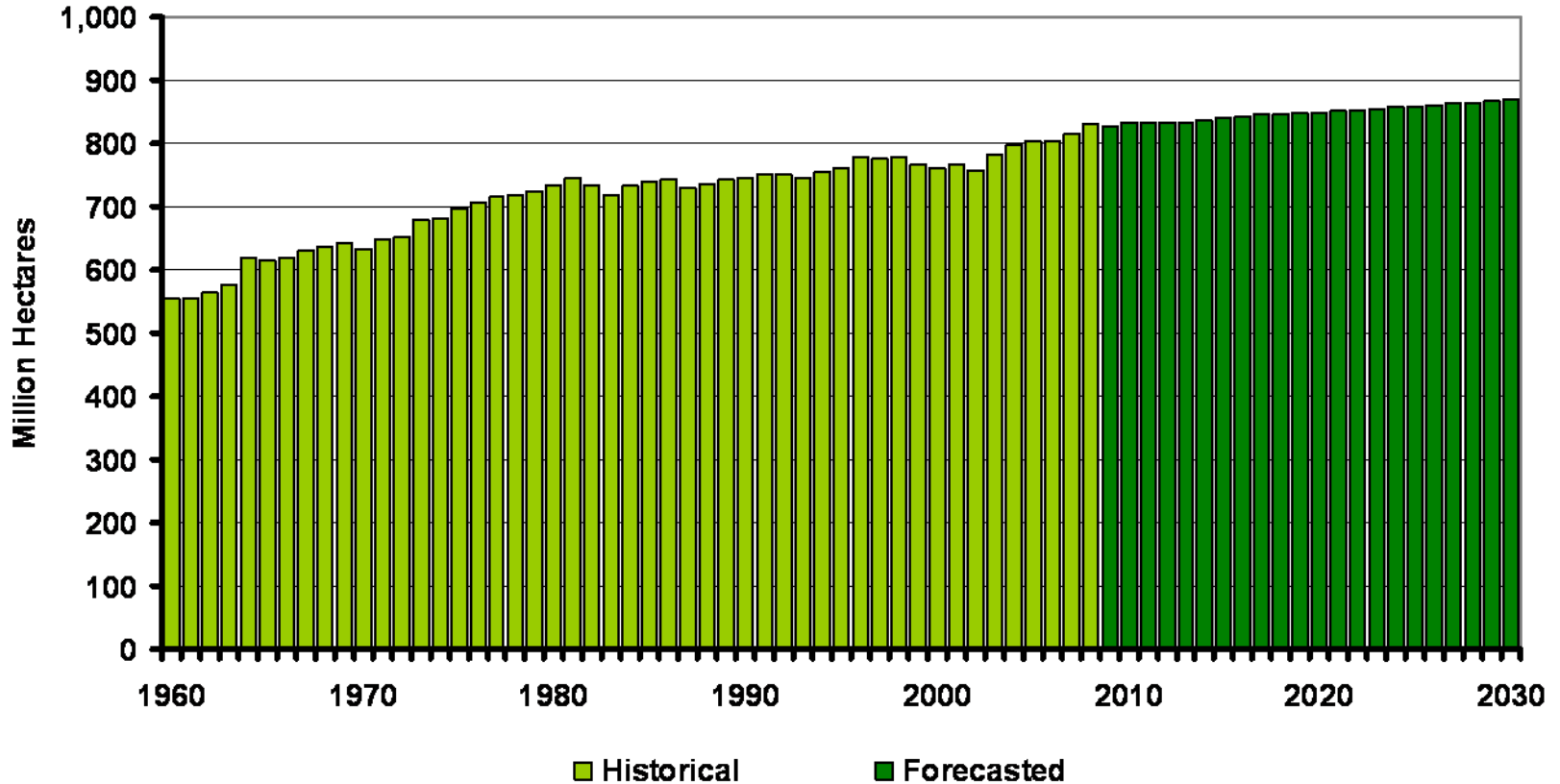


**Crops Included: Corn, Wheat, Rice, Cotton, Sorghum, Barley, Soybean Meal, Soybean Oil, Sunflower Meal, Sunflower Oil, Rapeseed Meal, Rapeseed Oil, and Palm Oil**

Biofuels industrial use is comprised of US corn used to make ethanol and all vegetable oils used to make US and EU biodiesel. US corn used for ethanol is reduced by one third to adjust for the distiller's grains by product.



# Land Use for the Primary Crops



# Summary

- The global economic situation will likely continue to deteriorate through most of 2009.
- Based on current projections, the impact on meat consumption will be relatively modest, but any worsening and the impacts could be more severe impacting US exports and commodity prices.
- Price volatility will continue as supply and demand condition remain relatively tight for the next few years.
- In the present environment, biofuels, particularly starch based ethanol production and biodiesel, will struggle to continue to grow.
- Technology is in the pipeline that could accelerate supply growth relative to demand.
- There are significant risks that current profitability will be eroded over the next five years.