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THE OIL SHOCK OF 2005 – WHAT IT MEANS FOR U.S. AGRICULTURE

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The Oil Shock of 2005 and U.S. Agriculture

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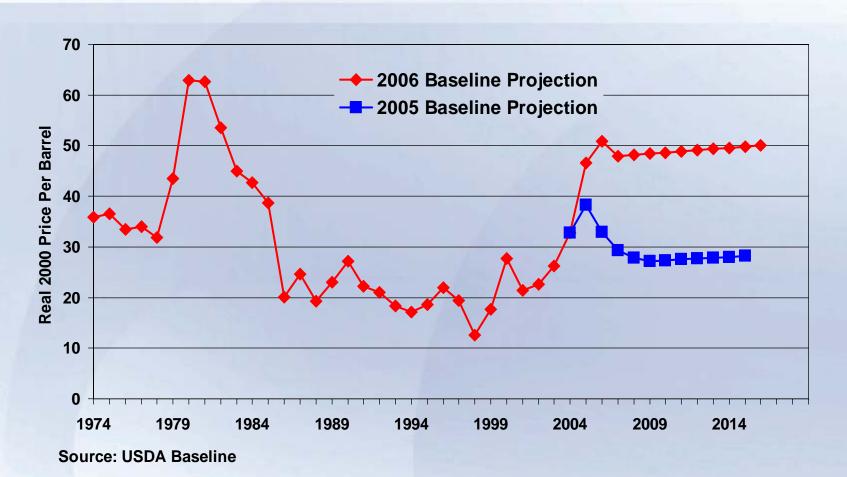


Introduction

- Oil prices rose in 2005 more than anyone expected
- Change in the current outlook for longterm increase in oil and energy prices
- What has caused this dramatic change?
- What does it mean for U.S. agriculture?



The USDA Baseline expectations of future oil price has jumped





What has caused change in energy outlook?

Demand outstripped supply

- High GDP growth in China, India and other Asian Newly Industrialized Economies competing with.....
- High GDP growth and energy demand in the United States
- Supply uncertainties from Iran and Iraq,
 Venezuela, and Nigeria
- Difficulties bringing new oil supplies online



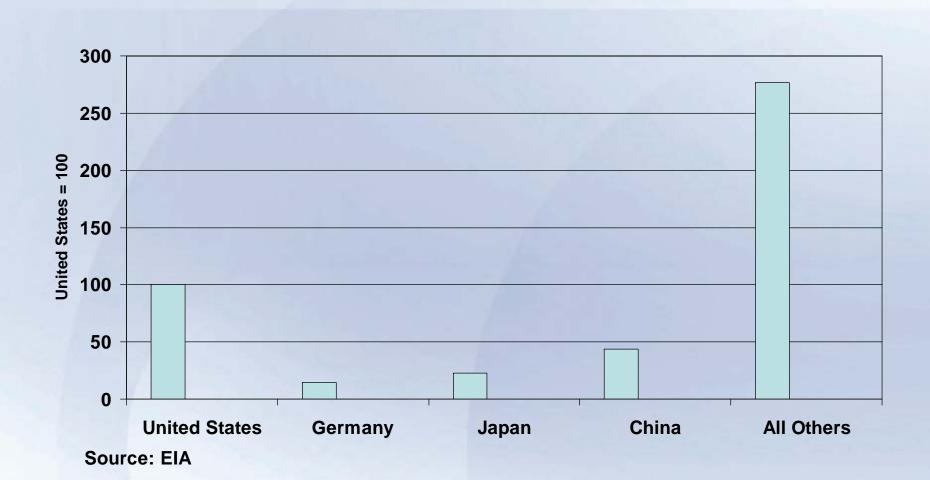
What factors will stabilize the energy market?

Over time higher prices will induce

- -efficiency gains
- -conservation
- -increase supplies from producers

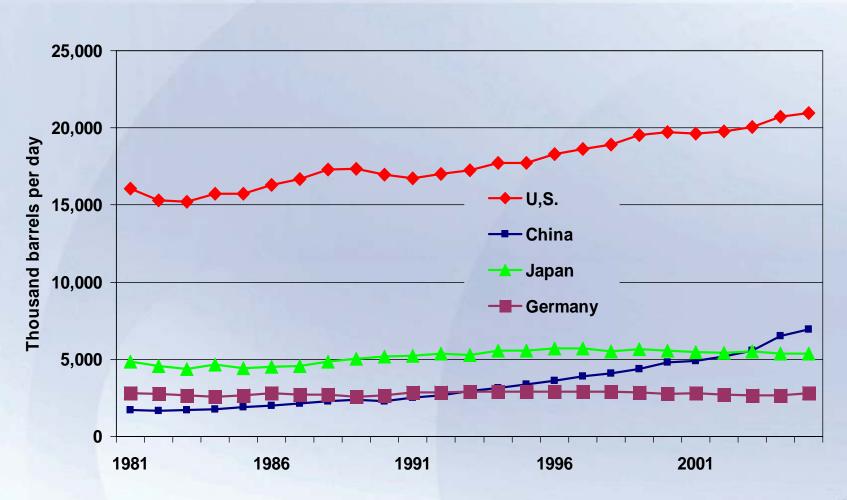


Energy use index of major users



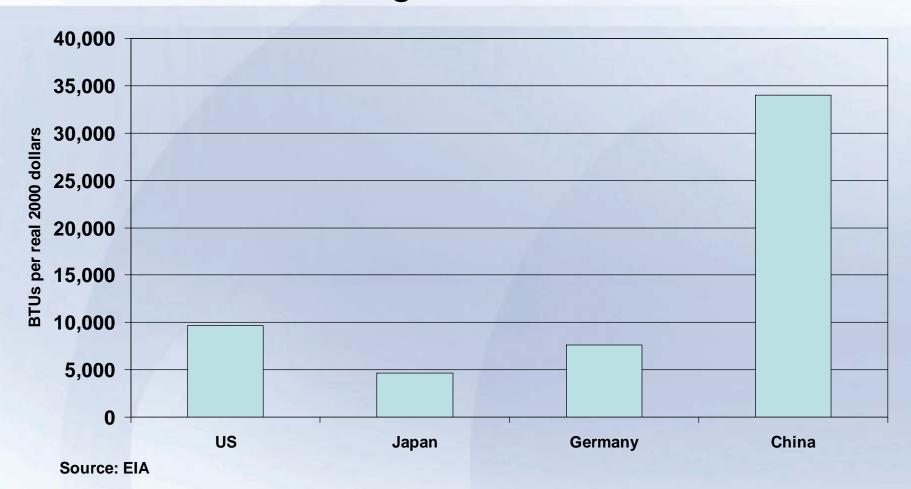


China becomes number two oil consumer in 2003



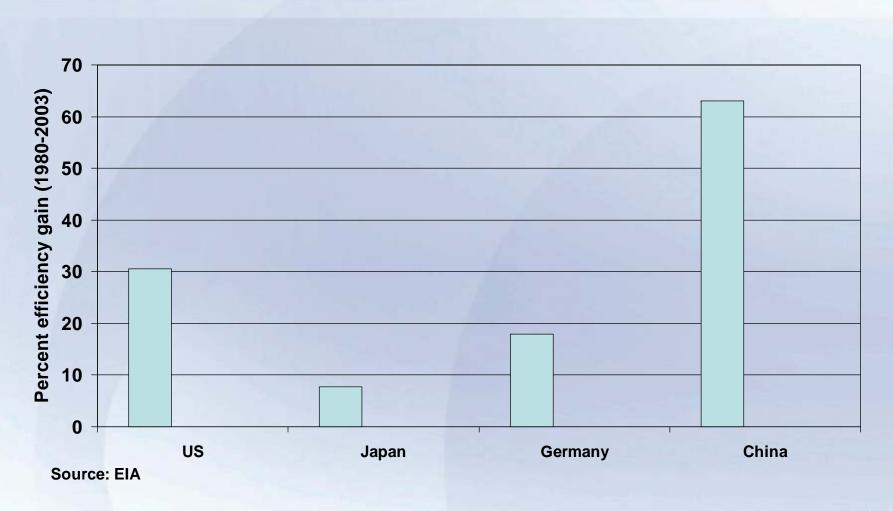


China has high energy use per dollar output, average 2001-2003





But China shows highest efficiency gains



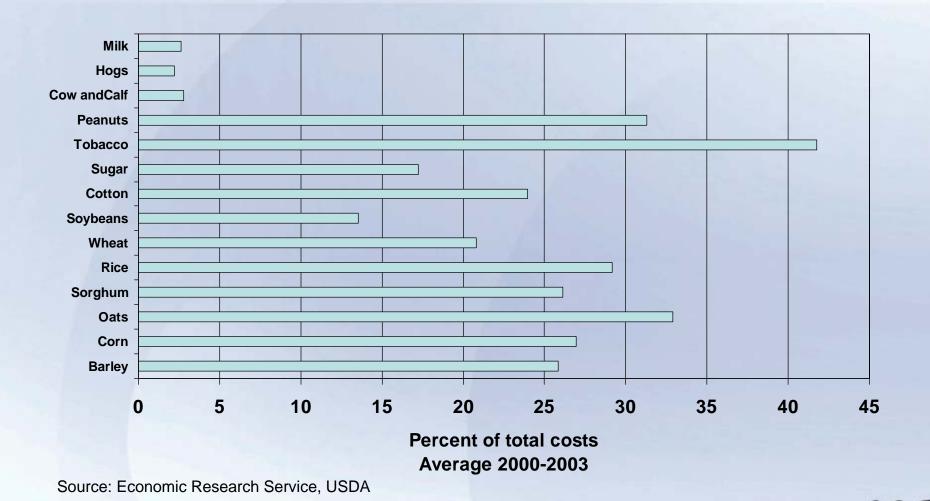


Where does U.S. agriculture fit in?

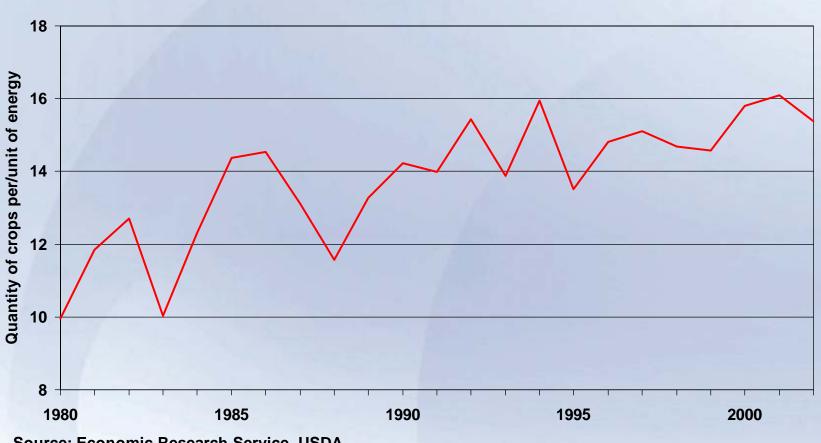
- Agriculture is an energy intensive sector
- Cheap energy has facilitated energy intensity
- Efficiency gains more important for sector
- Reducing energy use will result from:
 - further efficiency gains
 - compositional change away from high energy use in agricultural subsectors



Energy use is concentrated in crop production



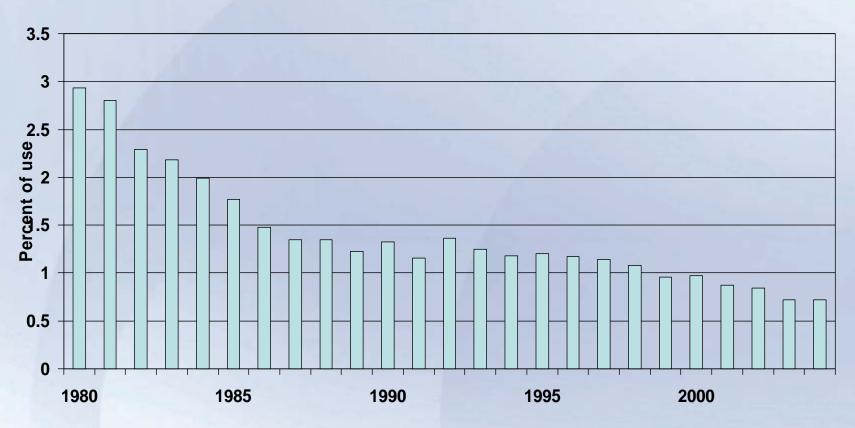
U.S. agriculture has increased energy efficiency over 50 percent







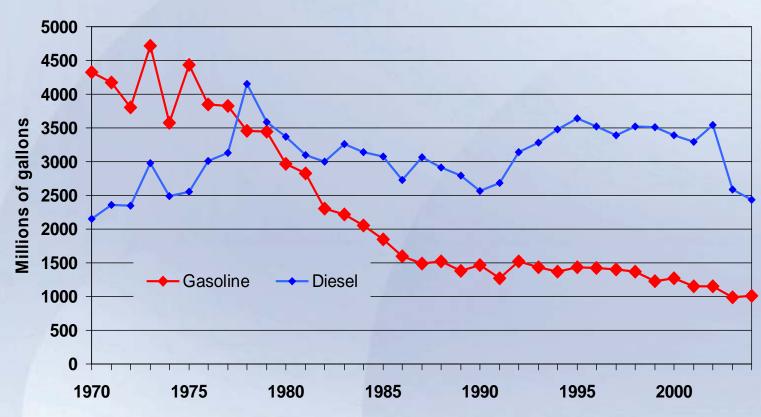
Farm percentage of US gasoline use drops sharply from 1980 to 2004

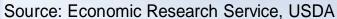


Source: Economic Research Service, USDA



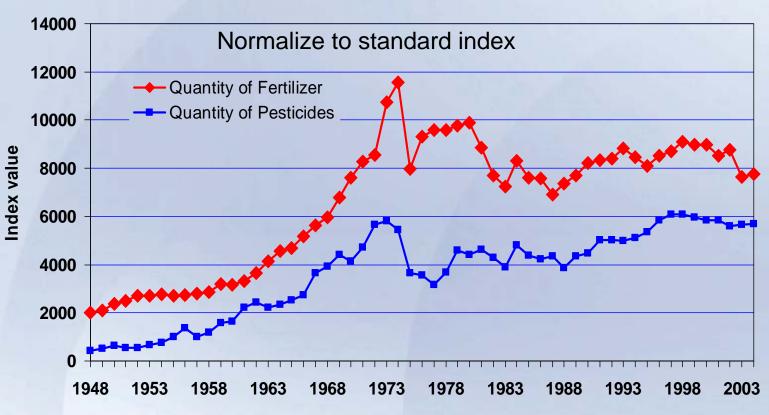
Farmers replace gasoline with diesel







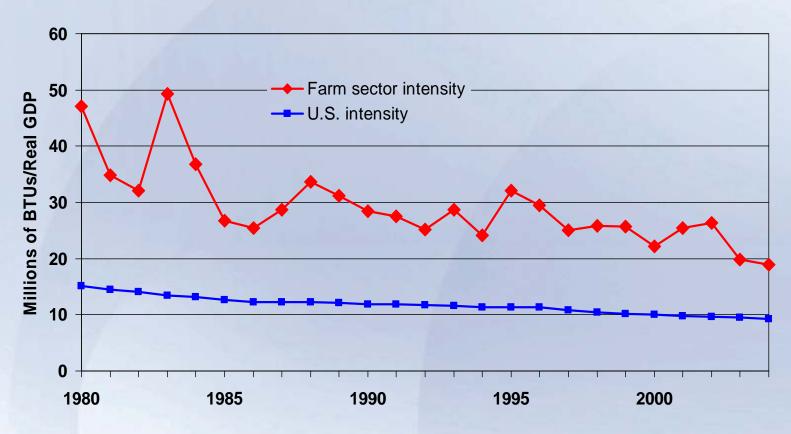
Fertilizer use peaks in 1974 while pesticide use peaks in 1997



Source: Economic Research Service, USDA



Farm energy intensity declined faster than overall U.S energy intensity 1980 to 2004



Source: Economic Research Service, USDA and EIA



Emerging patterns of agricultural energy use and efficiency

- Energy will be a major share of farm costs, even as efficiency improves
- High energy costs will be a drag on farm income
- High energy prices will stimulate energy efficiency gains
- High energy costs will encourage production of lower energy crops

