

A stylized graphic of a tree with a brown trunk and branches, and several green leaves of various shapes and sizes. The tree is positioned on the left side of the slide, with its trunk curving upwards and to the right.

Bowling Green

Economic and Social Implications of Peak Energy

**Student Research Conference
Western Kentucky University
March 26, 2011**

Who We Are

- A group of students interested in sustainability
- We have gathered research from the literature over the last few years
- Celena Allen, Ian Blaylock, Martha Caudill, T. J. Mann, Daniel Price, Kristin Smith, Jennifer Thurmond, Brenna Tinsley, Jon Zambrano

Objectives

- 1) Summarize literature reviewed on the social and economic implications of peak oil
- 2) Examine the situation in Bowling Green
- 3) Where to go from here

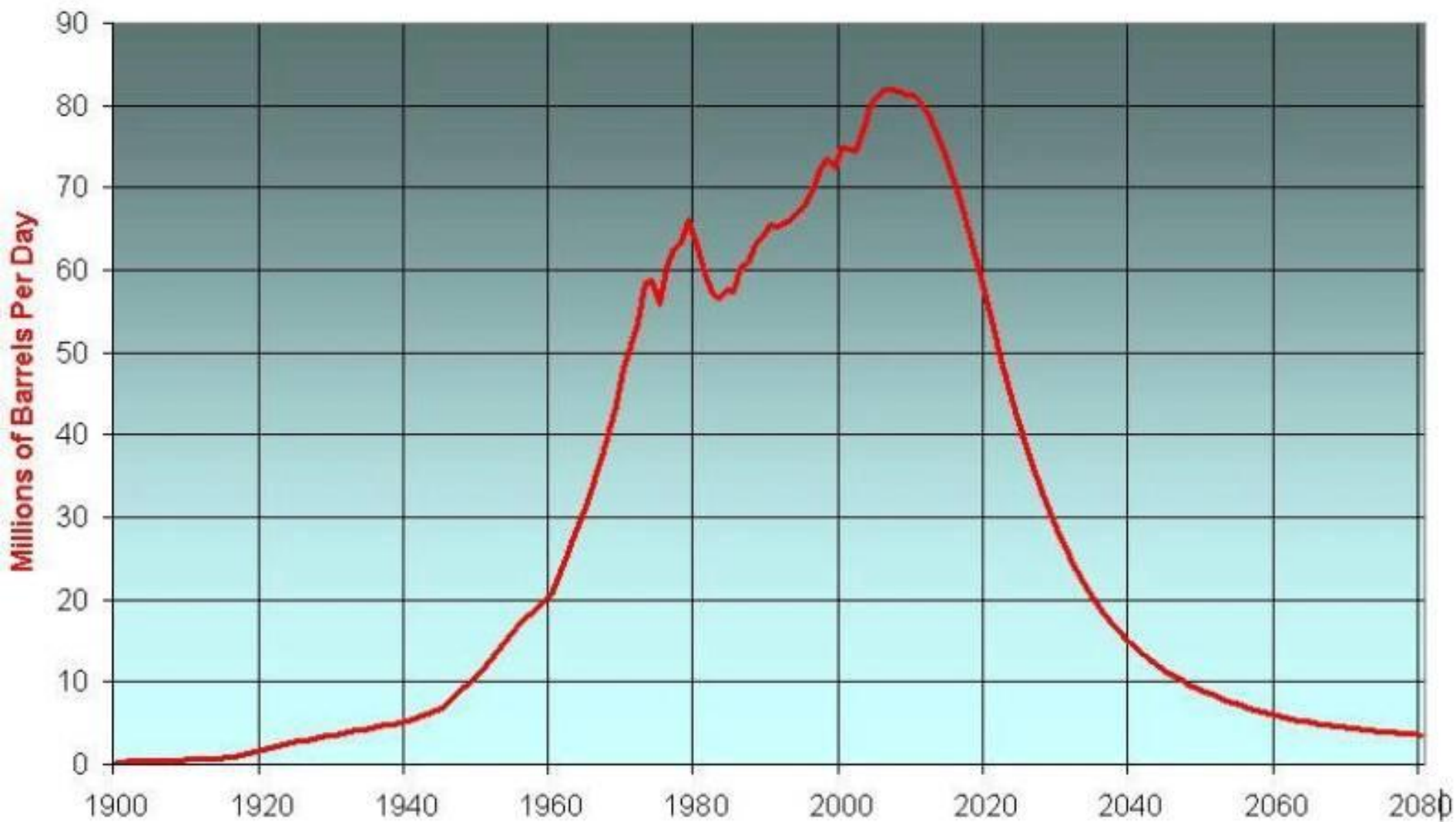
Peak Oil

- **Global Peak oil – 2006 (IEA)**
 - **The rate of production has plateaued and is declining**
 - **The cost of extraction and refinement of the oil itself is increasing and will continue to do so**

Sources: Richard Heinberg, *Powerdown: Options and actions for a post-carbon world*

Shaun Chamberlin, *The Transition Timeline*

World Oil Production 1900-2080



Peak Oil

- Food, plastics, and transportation costs will continue to increase
- Economic growth depends on low energy costs, both locally and globally



Sources: Heinberg, Chamberlin, Hopkins

Energy Alternatives

- Coal is nearing peak of production



Globally – 2011

China – 2011

U.S. – 2013

Source: Patzek and Croft, *A global coal production forecast with multi-Hubbert cycle analysis*

- Other alternative energy sources are inefficient as primary sources for energy
 - Too costly to be viable

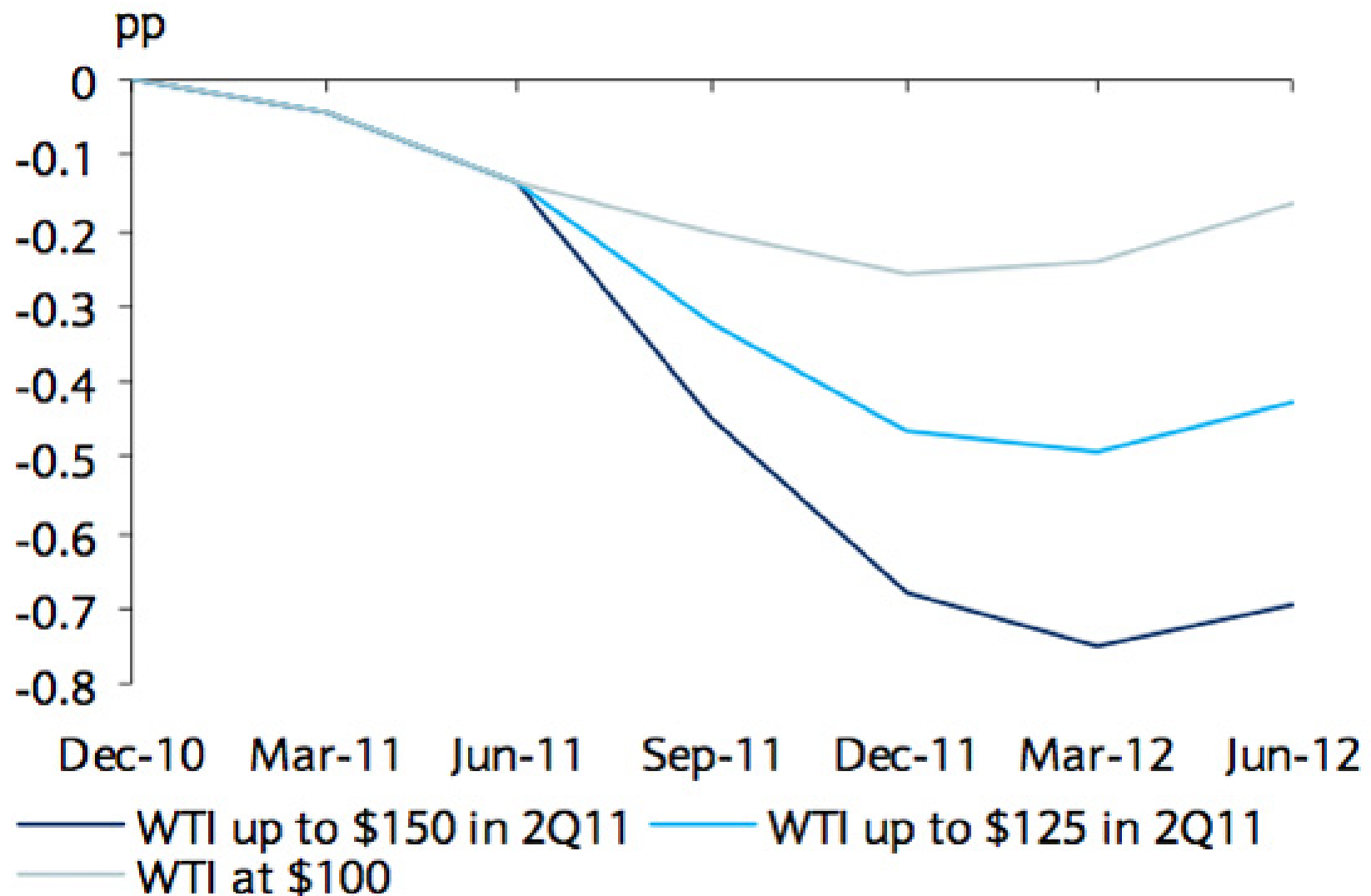


Impacts of Peak Energy

- **Economic**
 - Higher unemployment rates
 - Higher homeless population
 - Higher prices, lower wages
 - Unreliable international and interstate trade

Source: Richard Heinberg, *The Party's Over: Oil, War and the Fate of Industrial Societies*

Figure 3: Effect on global GDP growth of three oil scenarios



Source: Barclays Capital

Impacts of Peak Energy

- **Social**
 - Higher food prices
 - Higher crime rates
 - Individual transportation no longer practical
- **Sources:**
 - Richard Heinberg, *The Party's Over*
 - Jared Diamond, *Collapse*
 - Joseph Tainter, *The Collapse of Complex Societies*

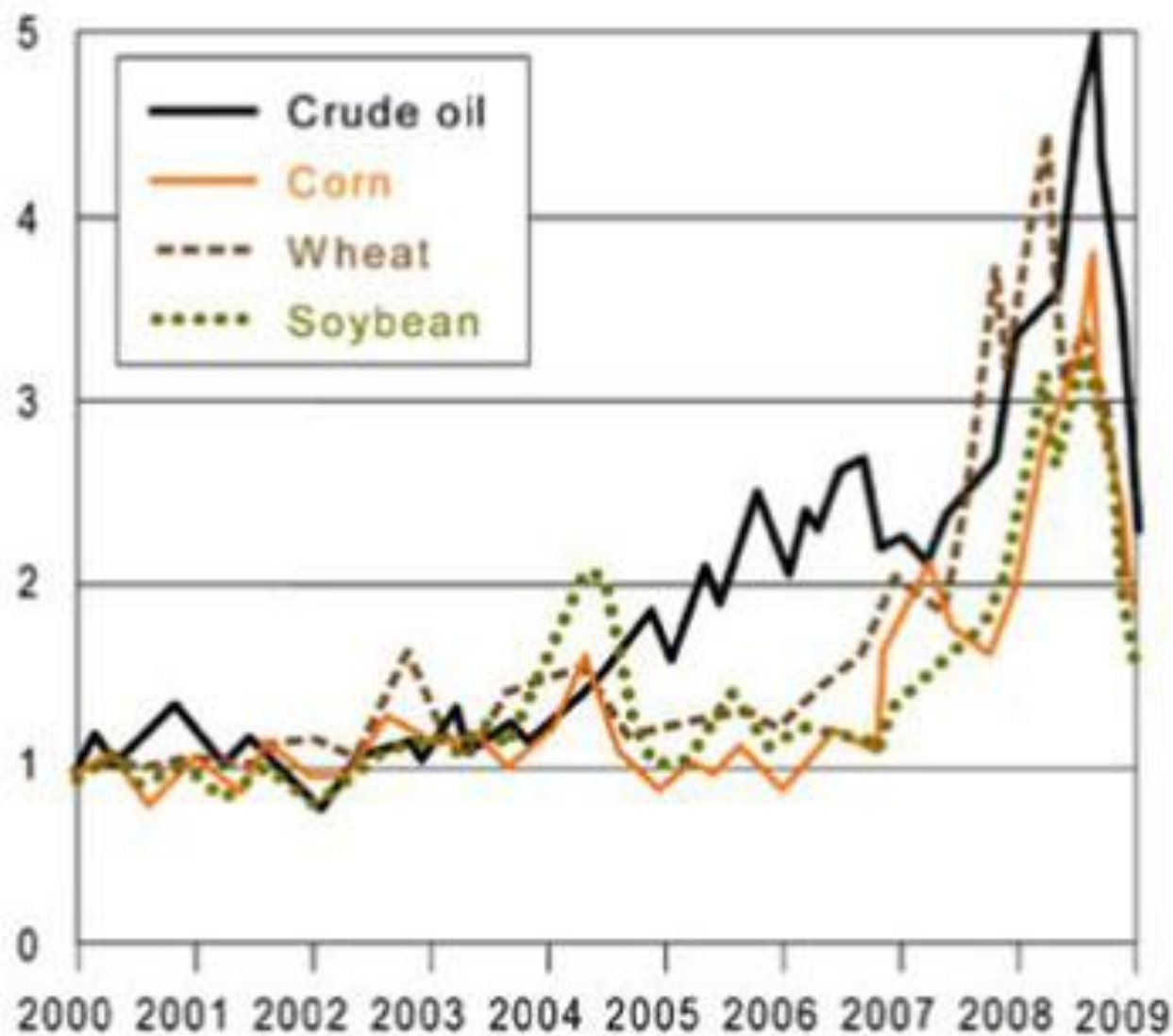


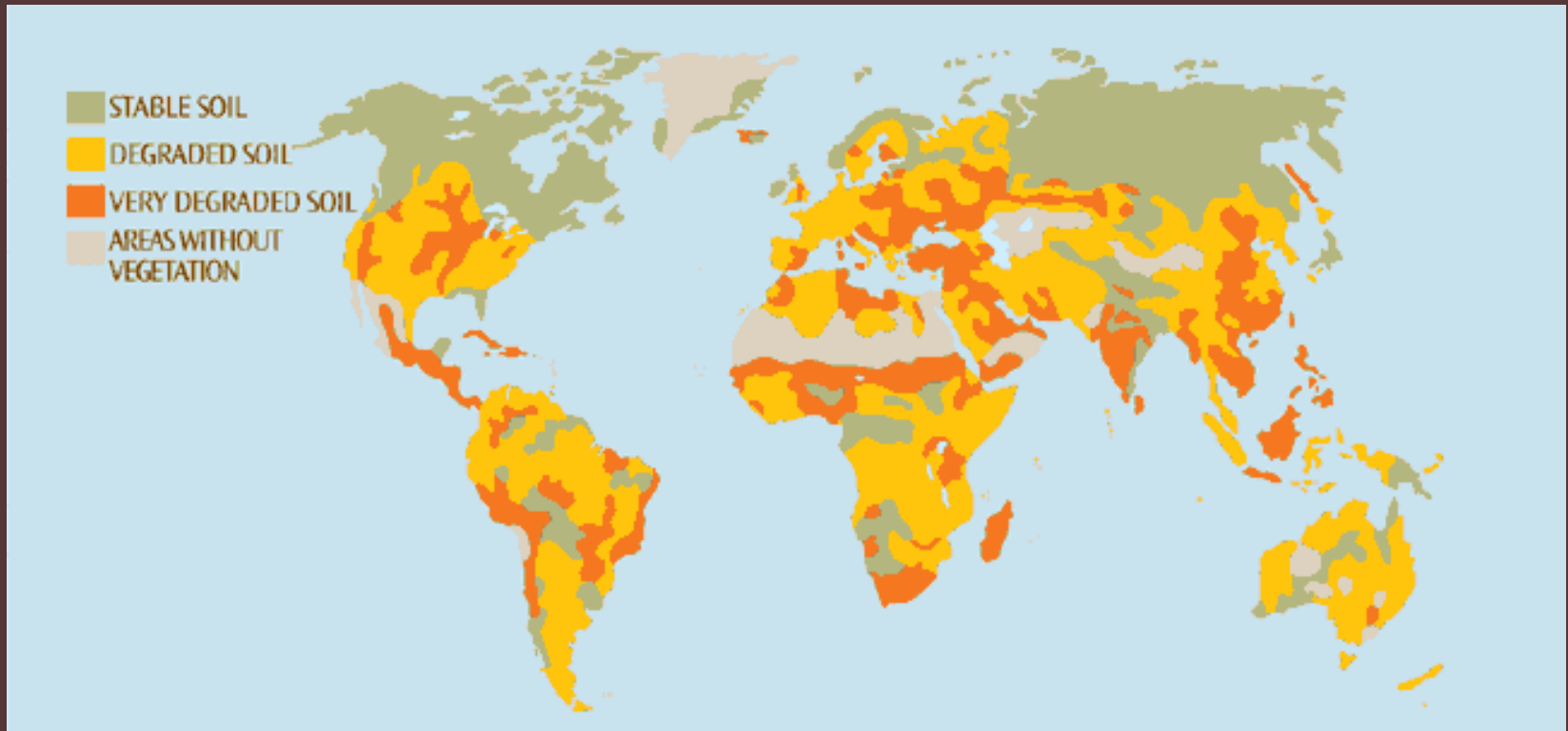
Figure 3. Relative price of crude oil, corn, wheat, and soybean on world markets, 2000-2008. (2000 price = 1).

Food Security

- **Limited local food production**
- **Agricultural problems due to rise in oil prices**
 - **Fertilizer, transportation, etc.**
 - **Trucker strikes**
 - **Supply disruptions**

Food Security

- **Diminishing arable land**
- **Water reserves**



What to think about for Bowling Green...

- **Local food sources?**
- **Alternative water sources?**
- **Public transportation?**
- **Can the local economy survive independently?**

City Manager

- This presentation was given to the city manager, Kevin Defebbo.
- There was general agreement on this assessment.
- His conclusion was that the city of Bowling Green was not able to help.
- “Politics isn’t designed to fix, it’s designed to advance interests.”

It's Up To Us

- **As Individuals, Neighborhoods, and Community Organizations**
- **Relocalization of the economy**
 - Food, supplies, recreation, jobs
- **Building of resilience**
 - Local social support system
 - Awareness of events, environment, options
- **Re-examine values of consumer society**

ARE YOU PREPARED?



WE ARE!



For More Information

- **Club ORLOV at WKU**
 - Facebook: Club Orlov
- **A New Story Foundation**
 - www.anewstory.org
 - Facebook: A New Story Foundation