

# Agriculture and Agricultural Landscapes in the 21<sup>st</sup> Century

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# **Agriculture and Agricultural landscapes in the 21<sup>st</sup> Century: a perspective from the International Assessment of Agricultural Knowledge, Science and Technology for Development ([www.IAASTD.org](http://www.IAASTD.org))**

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President Millennium Institute**

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**International Assessment of Agricultural Science and Technology for Development**



THE WORLD BANK



W H O



GLOBAL  
ENVIRONMENT  
FACILITY



**International Assessment of Agricultural Science and Technology for Development**

# Goal of the Assessment

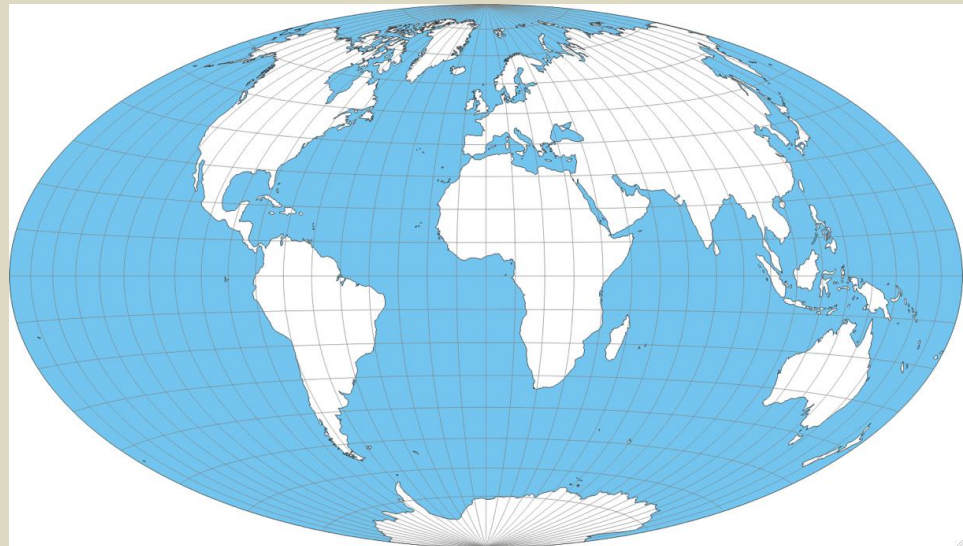
How can we reduce hunger and poverty, improve livelihoods, and facilitate equitable, environmentally, socially and economically sustainable development through the generation, access to and use of agricultural knowledge, science and technology?



**International Assessment of Agricultural Science and Technology for Development**

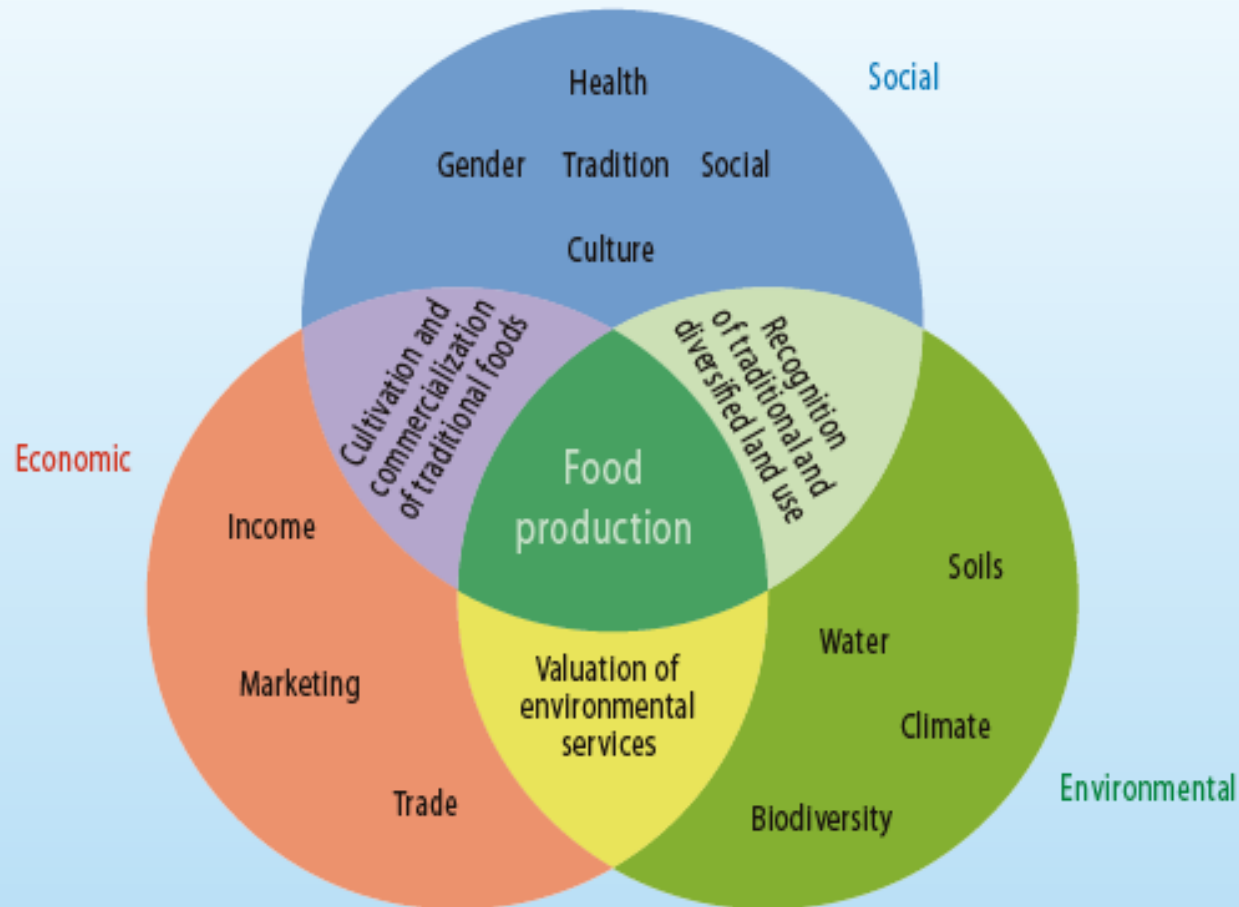
# Three Kinds of Places

1. Need more calories
2. Enough calories, want more protein
3. Excess calories



# Agriculture's Complexity

The inescapable interconnectedness of agriculture's different roles and functions



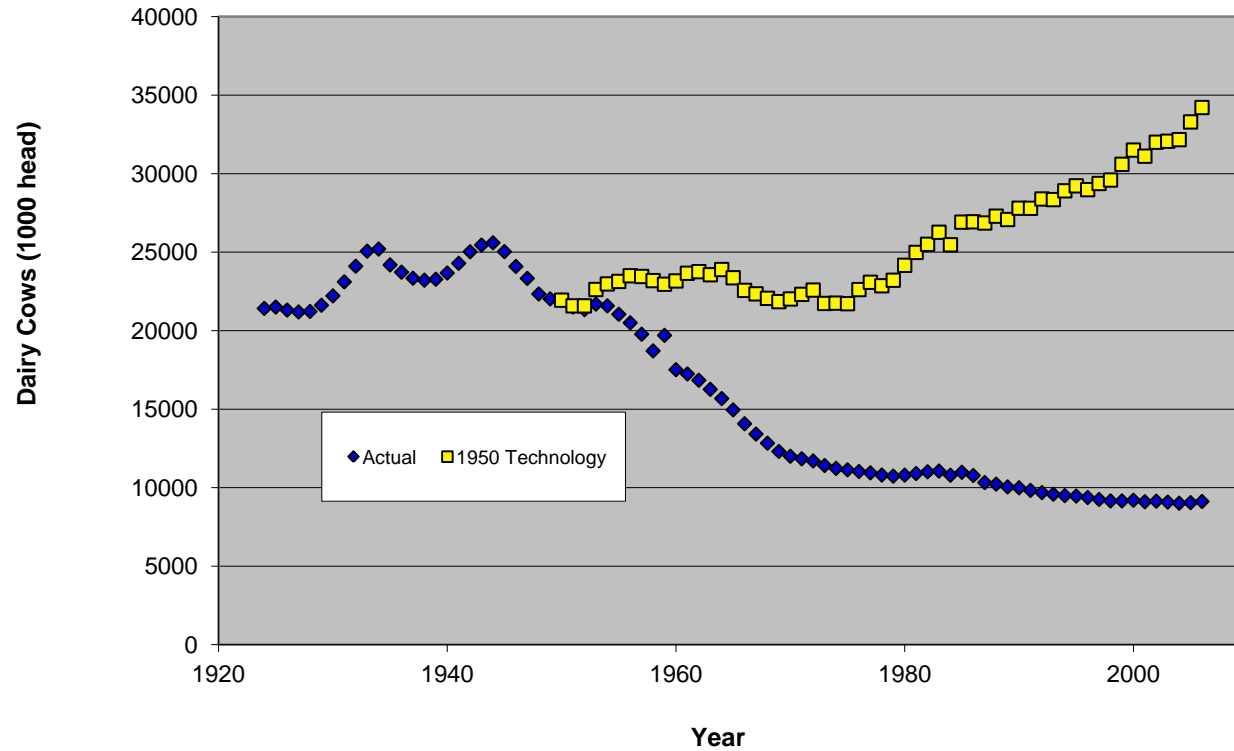
# Agricultural Productivity

<b>1798 Malthus</b>	<b>~1 billion people</b>	<b>20,000 m<sup>2</sup>/person</b>
2009	~6 billion people	2,000 m <sup>2</sup> /person
2050	~9 billion people	1333 m <sup>2</sup> /person

The main peculiarity which distinguishes man from other animals, is the means of his support, is the power which he possesses of very greatly increasing these means.

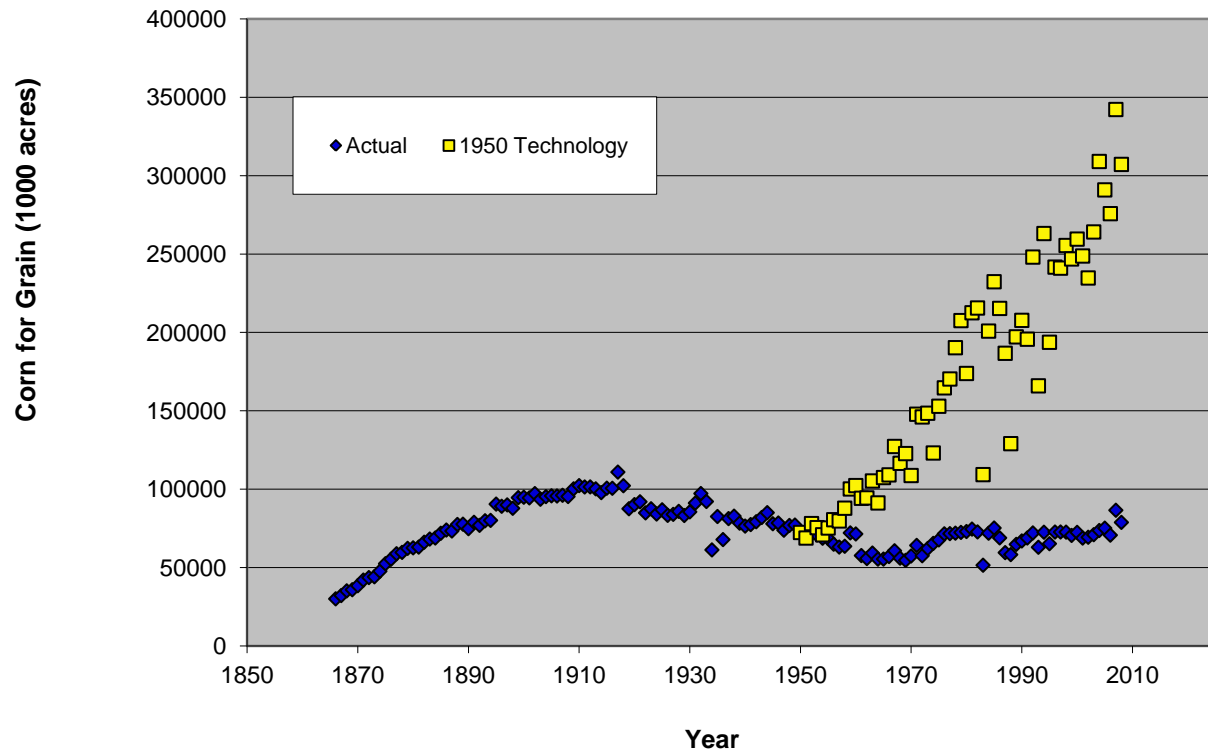
Thomas Malthus

# Number of Cows

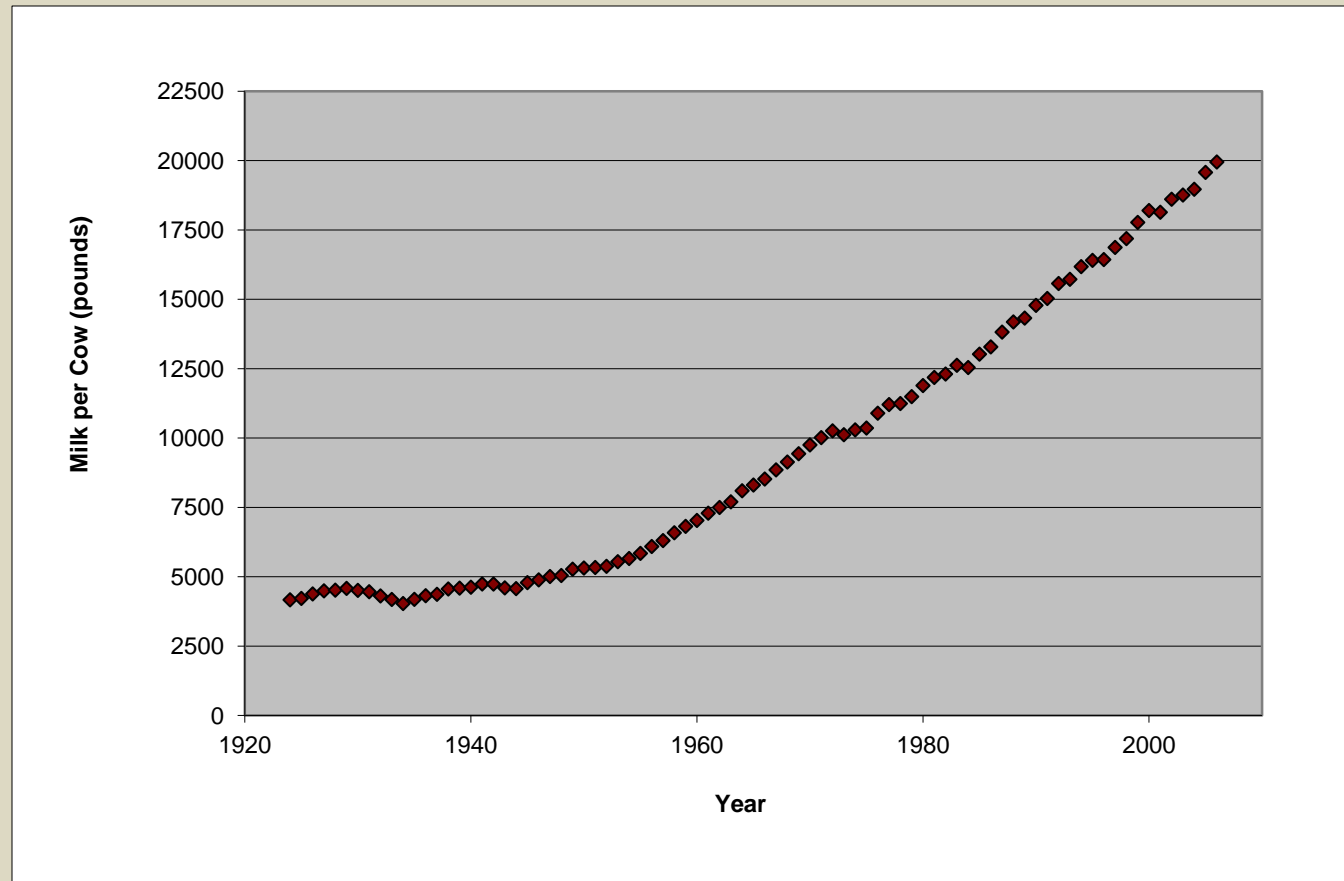




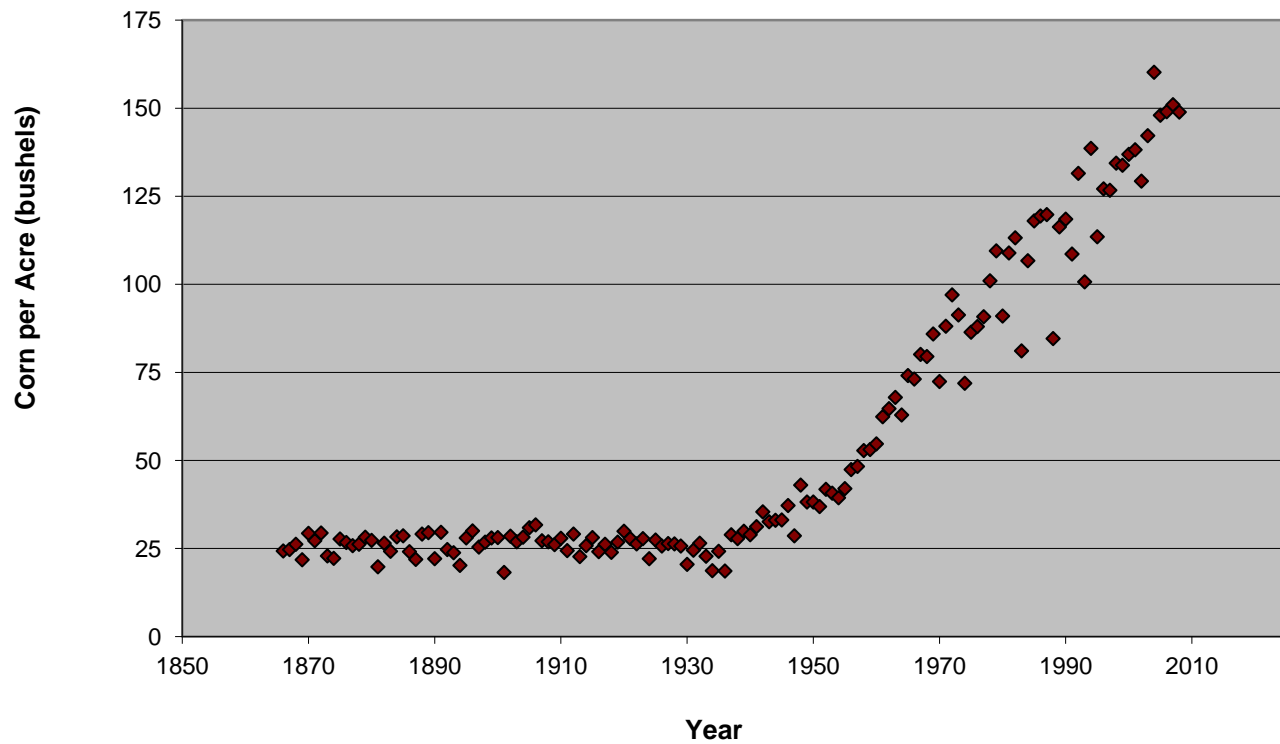
# Acres of Corn



# Milk Production



# Corn Production

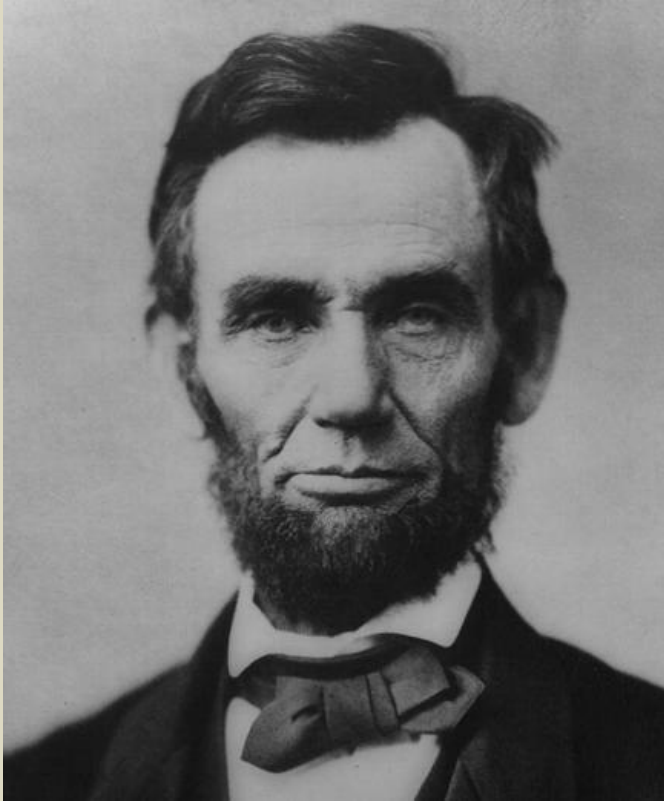


# Knowledge

Most major advances have been made at the expense of established “facts”. Invention of the wheel was inhibited for who knows how long by the then accepted theory that putting one foot ahead of the other is the way to move forward.

Daniel J. Boorstin

# Abraham Lincoln



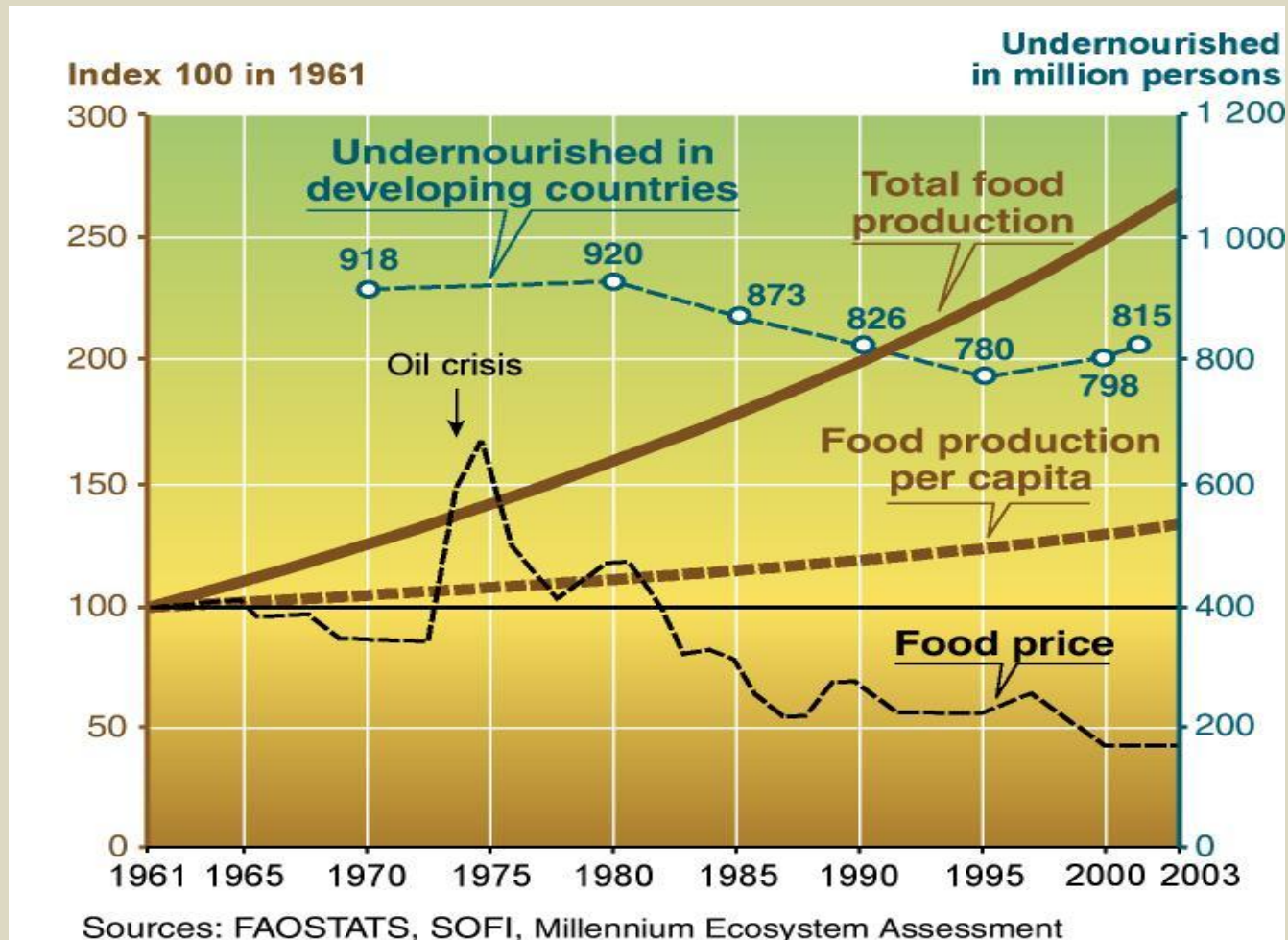
- U.S. Department of Agriculture
- Homestead Act
- Morrill Act

# Conditions for Success

The private sector must be the engine of economic growth; inflation must be low to maintain price stability; state bureaucracies must be small; government budgets must be close to balanced; tariffs on imported goods must be lowered or eliminated; restrictions on foreign investment must be removed; industries, and stock and bond markets must be open to foreign ownership and investment; quotas and domestic monopolies must be gotten rid of; exports must increase; state-owned industries and utilities must be privatized; capital markets must be deregulated and currencies made convertible; the economy must be deregulated to promote domestic competition; government corruption, subsidies and kickbacks must be eliminated; banking and telecommunications systems must be opened to private ownership and competition; and citizens must be allowed to choose from among competing foreign and domestic pension options and mutual funds.

Thomas L. Friedman

# Food Trends



## An Optimistic View

This is my long-run forecast in brief. The material conditions of life will continue to get better for most people, in most countries, most of the time, indefinitely. Within a century or two, all nations and most of humanity will be at or above today's Western living standards.

Julius Simon