

# Principles of Agriculture



# Agriculture Defined

- The deliberate modification of Earth's surface through cultivation of plants and rearing of animals to obtain sustenance or economic gain.
  - Intentional planting of crops and raising of domesticated animals

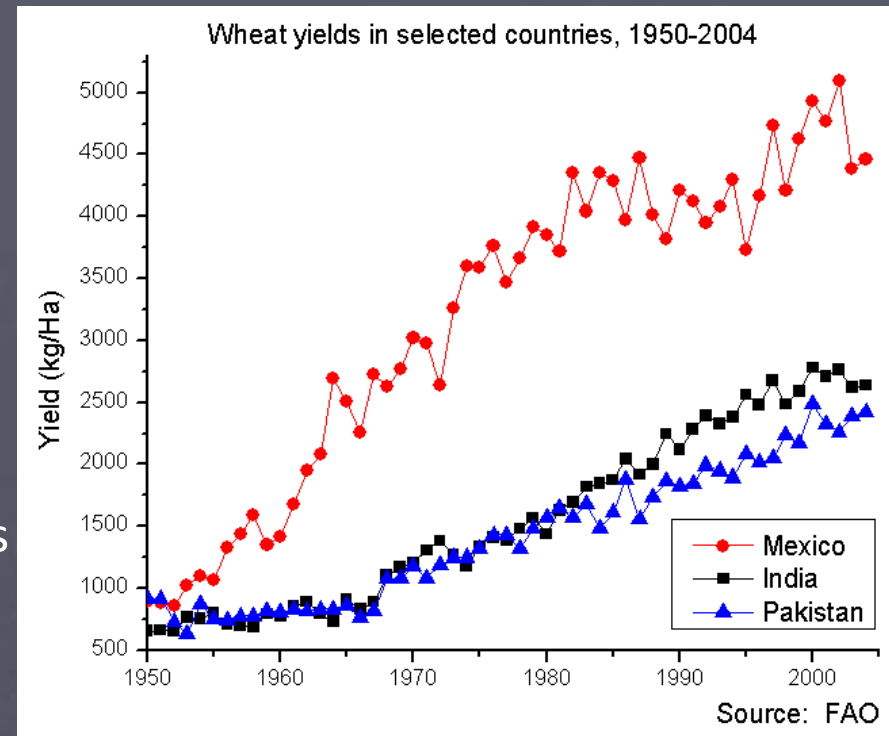


# Agricultural Revolutions

- First Agricultural Revolution
  - 10,000 year ago – The initial domestication of plants and animals
- Second Agricultural Revolution
  - 250 years ago - Mechanization of agriculture with improved practices of cultivation, harvesting, and storage of farm produce.
- Third Agricultural Revolution
  - In progress – Centered around development of Genetically Modified Organisms

# The Green Revolution

- The diffusion of agricultural technologies and practices to less developed areas
  - Specifically Mexico and Asia (India)
  - First practiced in 1940s in Mexico by Rockefeller Foundation
    - Sent agricultural experts to attempt to increase wheat yields
  - Primarily associated with 1960s
    - Norman Borlaug received 1970 Nobel peace prize for helping reverse famine of India and Pakistan



# Impacts of the Green Revolution

- Increased production
  - Rice production of Asia increases 66% between 1965 and 1985
  - India became self sufficient in some areas for wheat production
    - Paid back debts and became exporter of surplus
- Led to increased gaps between MDCs and LDCs
  - Areas that could not afford technology left behind
  - Lost competitiveness

# Current Agricultural Practices

- Genetically Modified Crops – Crops that carry new traits that have been inserted through advanced genetic engineering methods
- Organic Agriculture - Approach to farming and ranching that avoids the use of herbicides, pesticides, growth hormones, and other similar synthetic inputs

# Types of Agriculture: Subsistence versus Commercial



## Subsistence

- Family or social group works together
- People live on food they grow
- Small surplus traded or sold locally



## Commercial

- Products raised for market
- Low consumption of food by farmers

# Extensive versus Intensive



## Extensive

- A lot of land
  - Slash and Burn
  - Nomadic Herding
- Less labor



## Intensive

- Small amount of land
- Labor intensive
  - Wet Rice



# Extensive Subsistence Agriculture



# Intensive Subsistence Agriculture

