Agriculture
First Agricultural Revolution

• The transition from hunting & gathering to crop farming
  • Animal farming came later
• Forced on hunters & gatherers when their populations became too large to sustain
  • Began in the Old World around 11000 years ago
  • New World peoples invented their own agriculture 10000 years ago
First Agricultural Revolution

- Emphasis on subsistence cultivation
- But allowed the emergence of the first urban civilizations
- Enabled the acquisition of possessions, wealth
- Lead to social inequalities
- Farm productivity closely tied to population
- Promotes a rise in population, which begins to reach the limits of its food supply in late Medieval Europe
New World: Canada

• Indigenous peoples began farming in Canada around 1000 CE

• Based on shifting cultivation of corn, beans and squash with hand tools, crops planted in mounds

• The Six Nations, the Wendat big farming peoples in Southern Ontario, Southern Quebec
  • Also fished, hunted and gathered

• Allowed these peoples to build fairly large populations, powerful political systems, a Confederacy
Second Agricultural Revolution

• For thousands of years farming was focussed on subsistence, with limited production for cash.

• 600 years ago, in parts of Europe, farming transitioned to a more commercial form
Second Agricultural Revolution

• Became more profit motivated
• Boost production with simple techniques, better crop and animal varieties, simple fertilisers, cover crops, improved tools
• Commercialization of land market
• Lots of peasants driven off their land, head to cities, industry, emigration
Europeans come to Canada

• Land expensive in most parts of Europe
• Spread of commercial and industrial revolutions in Europe disrupted subsistence agriculture
• Some of the displaced come to Canada to seek cheap land taken/obtained from Indigenous people
• Colonial authorities parcel out the land through various survey systems, shaping the eventual rural settler landscapes
First and Second Agricultural Revolutions

- Produced a wide range of animal and crop varieties
- Farms tended to be mixed, still had a strong component of subsistence
- Animal manure fertilised fields
- Significant demand for labour
Third Agricultural Revolution

• The commercialization of agriculture is pushed further by science and technology
• Farms become more like factories, Agribusinesses
• Factory-like systems of production, market-driven chains of production
Third Agricultural Revolution

• Increased scale of holdings, tendency to monoculture
• Increased dependency on fossil fuels for fertilisers, pesticides, mechanical cultivation
  • Much more fossil fuel energy goes in than you get out in food energy
Third Agricultural Revolution

- Urban consumers become detached from food production, from the workings of the food chain.
- Place is used to sell food, but its real place origins are usually disguised.
- Consumers encouraged to go for price, not quality.
  - Bananas available in Canada are cheap, but pretty awful in quality.
- Genetic variety declines as farming adopts high-yield varieties.
Canadian Commercial Farming, mid 2000s

- 34% grains and oilseeds
  - Operating in a global market
- 24% livestock and red meat
  - Operating in a global market
- 19% dairy
  - Protected by supply management systems
- 9% horticulture
  - Operating in a global market
- 8% poultry & eggs
  - Protected by supply management systems
Factors in Commercial Farming

• Environmental factors:
  • Heat and light, length of growing season
  • Soil fertility
  • Moisture

• Human factors:
  • Access to market
  • Labour
  • Available capital and technology
Dairy

- Requires proximity to market, readily perishable
- Requires conditions favourable to growth of pasture
  - Long growing season
- Canadian supply management systems restrict outside competition from Canadian/provincial markets
  - Milk quotas restrict production
  - US objecting to these restrictions
- Male animals of dairy breeds contribute to a secondary beef market
- S Ontario, S Quebec: big populations, suitable climate, soil
Dairy

• US could supply the entire Canadian market with milk from just 4 giant dairy plants
• US wants to dismantle Canadian dairy marketing system
• Ending supply management would make basic dairy products cheaper for Canadian consumers
• But would ruin Canadian dairy farming
Highway 39, Saskatchewan
Grains and Oilseeds

• Suited to Prairie provinces, where soils, moisture, heat sufficient
• Does not require proximity to market
• Market mostly overseas, where Canadian producers face competition
• Precarious access to global markets a hazard for Canadian producers
  • China restricting access to Canadian soya beans
4th Agricultural Revolution

• Need to transition farming to something more sustainable, resilient to climate change
• Yet productive enough to feed 9 Billion+ people
• Will have to phase out fossil-fuel dependence
• Will somehow blend high-tech with sustainable