

Food vs Feed: Chapter 3

TS2T 402

Ag Issues in Society

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What is current population?

- In U.S?
- In the World?
- Population clock
 - <http://www.census.gov/main/www/popclock.html>



What is current population?

- In U.S?
 - 301 million

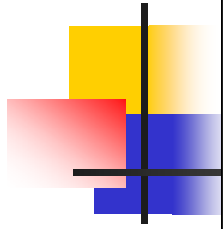
- In the World?
 - 6.57 billion



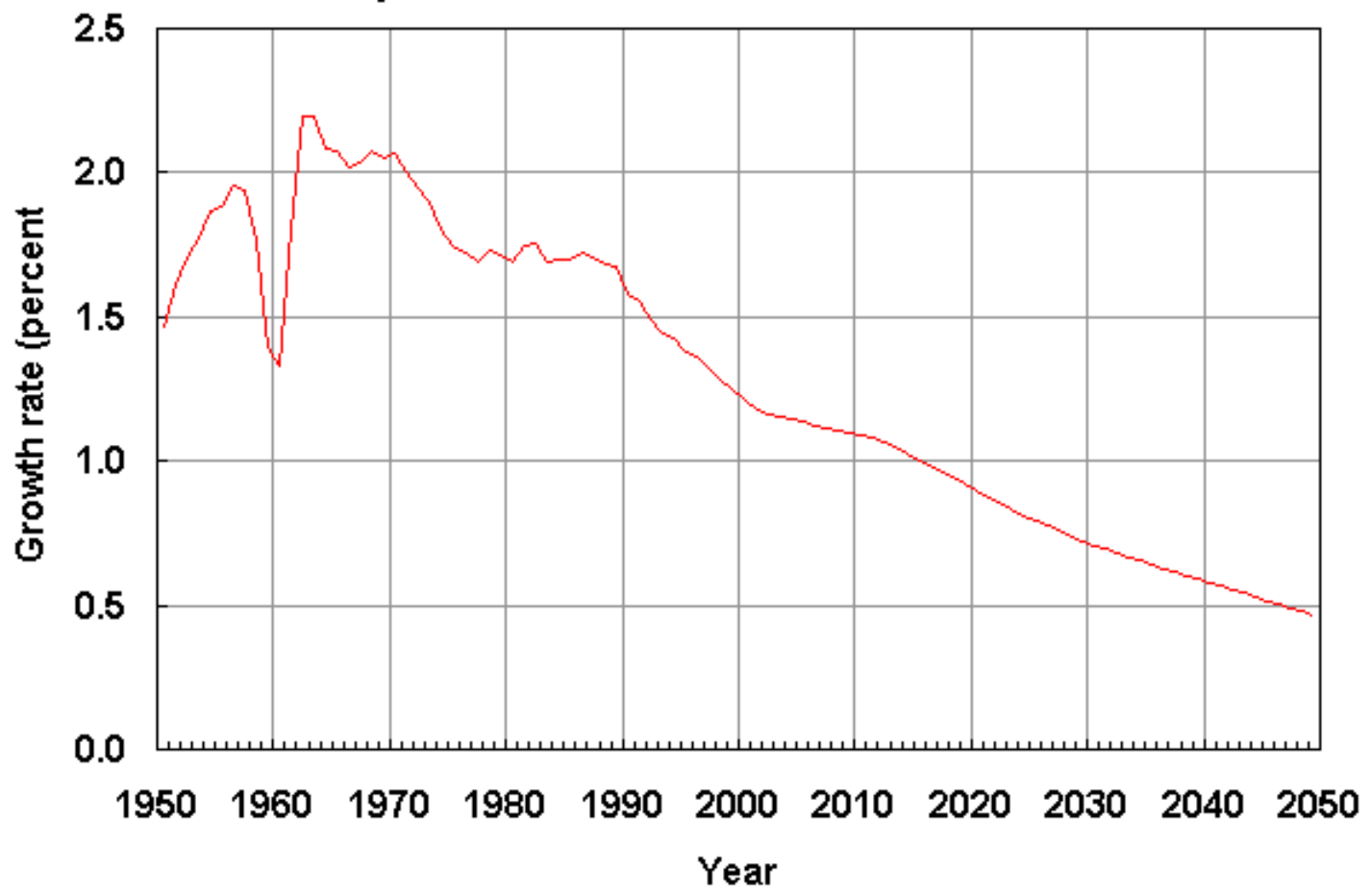
Historical World Growth

- 1950: 3 billion
- 1998: 5.9 billion
- 2000: 6.04 billion
 - Doubled in 50 years
 - 100% growth
- 2007: 6.57 billion
- 2050: Projected at 9.2 billion
 - Still 44% growth in 50 years
 - Assuming .47% growth/year by 2050

Source: U.S. Census Bureau, Population Division



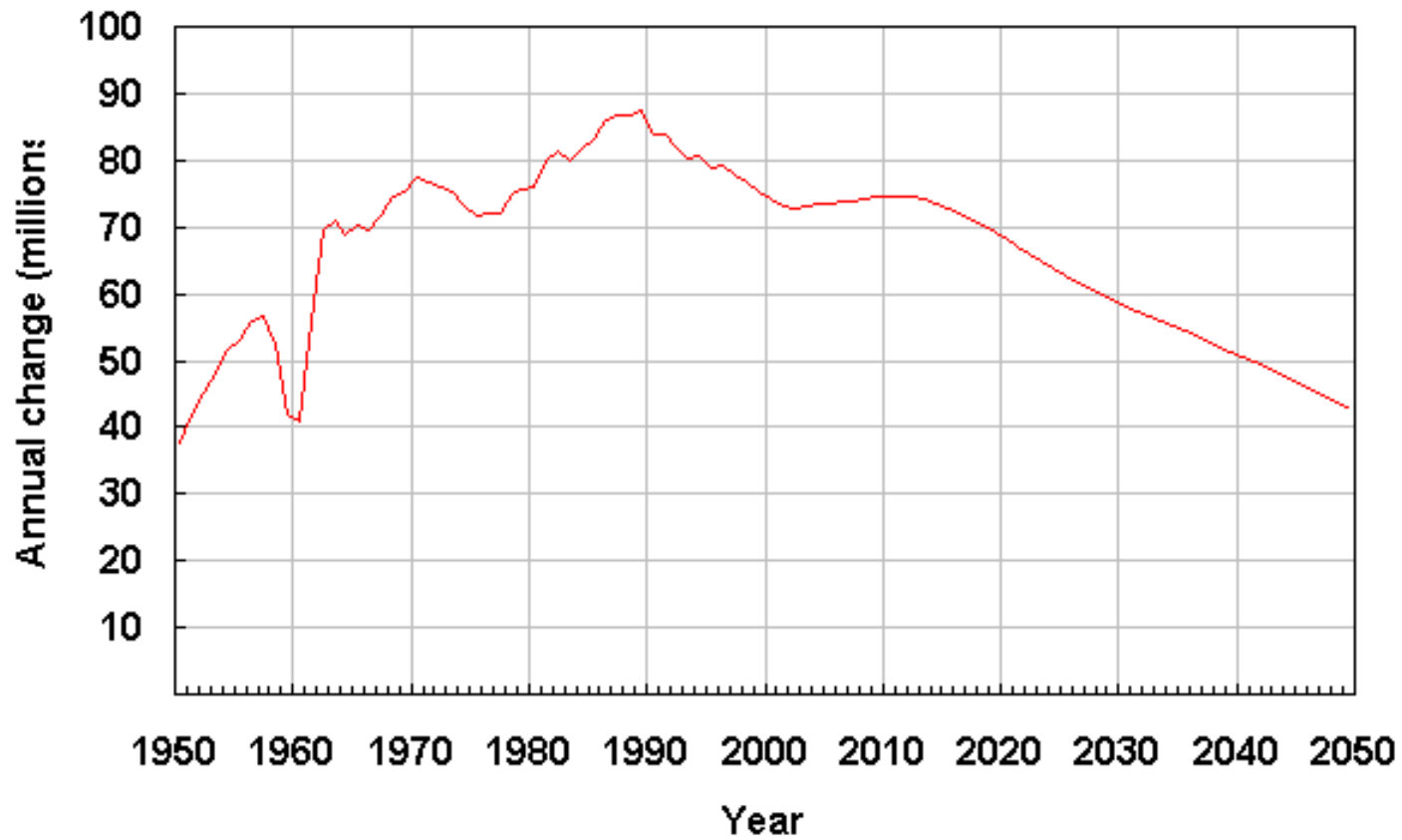
World Population Growth Rate: 1950-2050



Source: U.S. Census Bureau, International Data Base, September 2004 version.



Annual World Population Change: 1950-2050



Source: U.S. Census Bureau, International Data Base, September 2004 version.



Historical U.S Growth

- 1950: 152 million
- 1970: 205 million
 - Post baby boomer
- 2000: 274 million
 - 80% growth in 50 years
- 2007: 301 million
 - Growing about .9% per year
 - Including net immigrant population

<http://www.census.gov/popest/archives/1990s/popclockest.txt>



Where is the population growing?

- Developed Countries
 - U.S, Japan, Canada, Western Europe
 - 5% of growth
- Developing Countries
 - India, China, Pakistan, Nigeria, Indonesia
 - 95% of growth



Why does it matter?

- Developing countries are least prepared for population increases
- Population momentum
 - Can't really be stopped now
- Increased Incomes
 - Resulting Dietary changes



What is Population Momentum?

- Population pyramids
 - <http://www.census.gov/ipc/www/idbpyr.html>



Food

- Calories

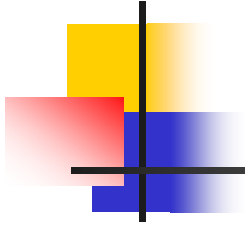
- Protein



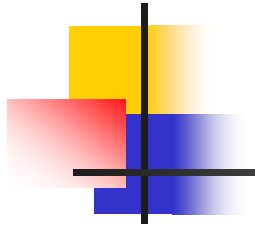
Worldwide Caloric and Protein Intakes/Person/Day

Animal Product Contribution to Per Capita Calorie, Protein and Fat Supply						
	Total Kcal	% of calories	Total Protein (g/d)	% of protein	Fat (g/day)	% of fat
Developed	3260	26%	99 g	55%	119 g	52%
Developing	2679	13%	69 g	29%	63 g	41%
World Ave	2805	16%	76 g	37%	75 g	45%

Source: Agripedia (<http://frost.ca.uky.edu/agripedia>)



The majority of calories and
protein come from cereal
grains



Importance of Cereal Grains

Worldwide, cereal grains are still the largest percentage of calories and protein

- 84% of calories
- 63% of protein
- But there are disparities among countries
- What are cereal grains?
 - Wheat, Corn, Rice
 - Account for 75% of world production



But its changing

- Developing Countries
 - 1960
 - 1642 calories/day
 - 10% wheat; 3% animal products
 - 1996
 - 2844 calories/day
 - 20% wheat; 17% animal products



Why is it changing?

- Increased incomes

- More meat
- More beer



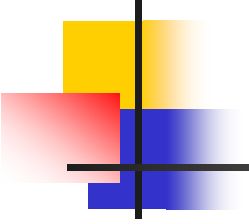
Who will feed China?

- Written by Lester Brown in 1995
- Overview of Problem
 - Population increasing
 - Incomes Rising
 - Diets changing
 - Need more grain to produce animal products



What was the answer?

- China will feed itself
- Side issue
 - China will have the money to buy the food it needs
 - But others may go without
- Now, “Who will feed India?”



.....if we took the animals off the land and put it in crop production, we could feed all the starving people in the world.....