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Section D: Food Security

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What Is Food Security?

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”

— *Food and Agriculture Organization of the UN (FAO), 1996*

Food as a Human Right

- Food is necessary for life and is a fundamental right
- Universal Declaration of Human Rights (1948)
 - Article 25: “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family including food, clothing, housing, and medical care and necessary social services ...”

Right to Food Further Defined

- UN Economic and Social Council. (1999, May 12). General comment.
 - “The Committee affirms that ... the right to adequate food is indivisibly linked to the inherent dignity of the human person and is indispensable for the fulfillment of other human rights enshrined in the International Bill of Human Rights. It ... is also [and is] inseparable from social justice, requiring the adoption of appropriate economic, environmental and social policies, at both the national and international levels, oriented ... to the eradication of poverty and the fulfillment of all human rights for all.”
 - Available at:
[http://www.unhchr.ch/tbs/doc.nsf/\(Symbol\)/3d02758c707031d58025677f003b73b9?Opendocument](http://www.unhchr.ch/tbs/doc.nsf/(Symbol)/3d02758c707031d58025677f003b73b9?Opendocument)

Famine and Hunger

- Hunger and famines have plagued mankind for millennia and have been concerns of human societies for centuries
- 850 million worldwide are undernourished—a number that has hardly changed since 1990 (UN, 2006)
- 20 million infants per year are born with low birth weights (FAO)
- UN Millennium Development Goals
 - Goal 1: “Eradicate extreme poverty and hunger”



Concept of Food Security

- Concept of food security first used in discussions about hunger in the 1970s (World Food Conference, 1974)
- Hunger was seen primarily as a “food problem”
- Therefore, the goals to achieve food security were ...
 - Ensuring adequate production of food and national food self-sufficiency
 - Stabilizing the flow of food supplies

Expansion of the Definition of Food Security

- *Access* to available food by vulnerable people
- 1983—FAO Committee on World Food Security formalized the definition of food security
 - Ensuring adequacy of food supplies
 - Maximizing stability of supplies
 - Securing access to available supplies to all who need them
- *Activity level* was added to the goals of food security in a 1986 World Bank position paper on poverty and hunger
 - “Food security must assure access by all people at all times to enough food for an active and healthy life”

1996 Rome Declaration on World Food Security

- Adopted by 176 countries and the European Community, the Rome Declaration and its accompanying action plan set important goals for world food security within a context of the right to food
 - Improving access
 - Sustainable food production
 - Sustainable consumption
 - And underscoring that ...
 - ▶ It is unacceptable that 800 million (in 1996) lack food for basic nutritional needs
 - ▶ Poverty is a major cause of food insecurity

1996 Rome Declaration on World Food Security

- Formal adoption of the right to adequate food—a milestone
 - “We reaffirm *the right of everyone (present and future generations) to have access to safe and nutritious food*, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger.”
- While food supplies have increased, major problems persist that prevent basic food needs from being met throughout the world, including ...
 - Lack of access
 - Inadequate household and national income
 - Instability of international trade
 - Manmade and natural disasters, including environmental degradation
 - Conflict, terrorism, and corruption

Rome Declaration: Implementation Steps

- Increased food production, including staple food, within the framework of ...
 - Sustainable management of natural resources
 - Sustainable agriculture, fisheries, forestry, and rural development
 - Elimination of unsustainable patterns of consumption and production, particularly in industrialized countries
 - Early stabilization of the world population

Goal 1: United Nations Millennium Development Goals

- “Eradicate extreme poverty and hunger”
 - Targets for 1990 and 2015
 1. Cut in half the proportion of people whose income is less than \$1 a day
 2. Cut in half the proportion of people who suffer from hunger

Progress on Millennium Development Goal (MDG) #1

- Progress 1990-2004
 - Extreme poverty
 - ▶ The proportion of people living in extreme poverty fell from nearly a third to less than one fifth
 - ▶ If the trend continues, the MDG poverty reduction target will be met for the world and in most regions, except western Asia, sub-Saharan Africa, and the European transition countries
 - Children under 5, underweight
 - ▶ Globally, the proportion of children under 5 years old who are underweight decreased by one-fifth
 - ▶ If trends continue, the target of halving the proportion of underweight children will be missed by 30 million children, mostly due to slow progress in southern Asia and sub-Saharan Africa

Food Security and Methods of Production

- The International Food Policy Research Institute (IFPRI) 2001 definition of food security includes *methods of production*
 - A food-secure world is one “... *where every person has access to sufficient food to sustain a healthy and productive life, where malnutrition is absent, and where food originates from efficient, effective, and low-cost food systems that are compatible with sustainable use of natural resources*”

Why Do Food Production Methods Matter?

- Environmental effects
 - Humans have already altered between one-third and one-half of Earth's non-ice-covered land, much of it for agriculture
 - 200 years ago, average top soil depth was 21 inches on cropland—today it's 6 inches (UNESCO)
 - Almost 60 percent of the world's freshwater withdrawals go toward irrigation of crops (UNESCO)
 - Many major fisheries are fully exploited, in decline, or collapsing; and current harvest is 25 percent greater than sustainable yield
- Economic
 - Production methods have economic impacts on small-scale farmers and retailers; rural communities

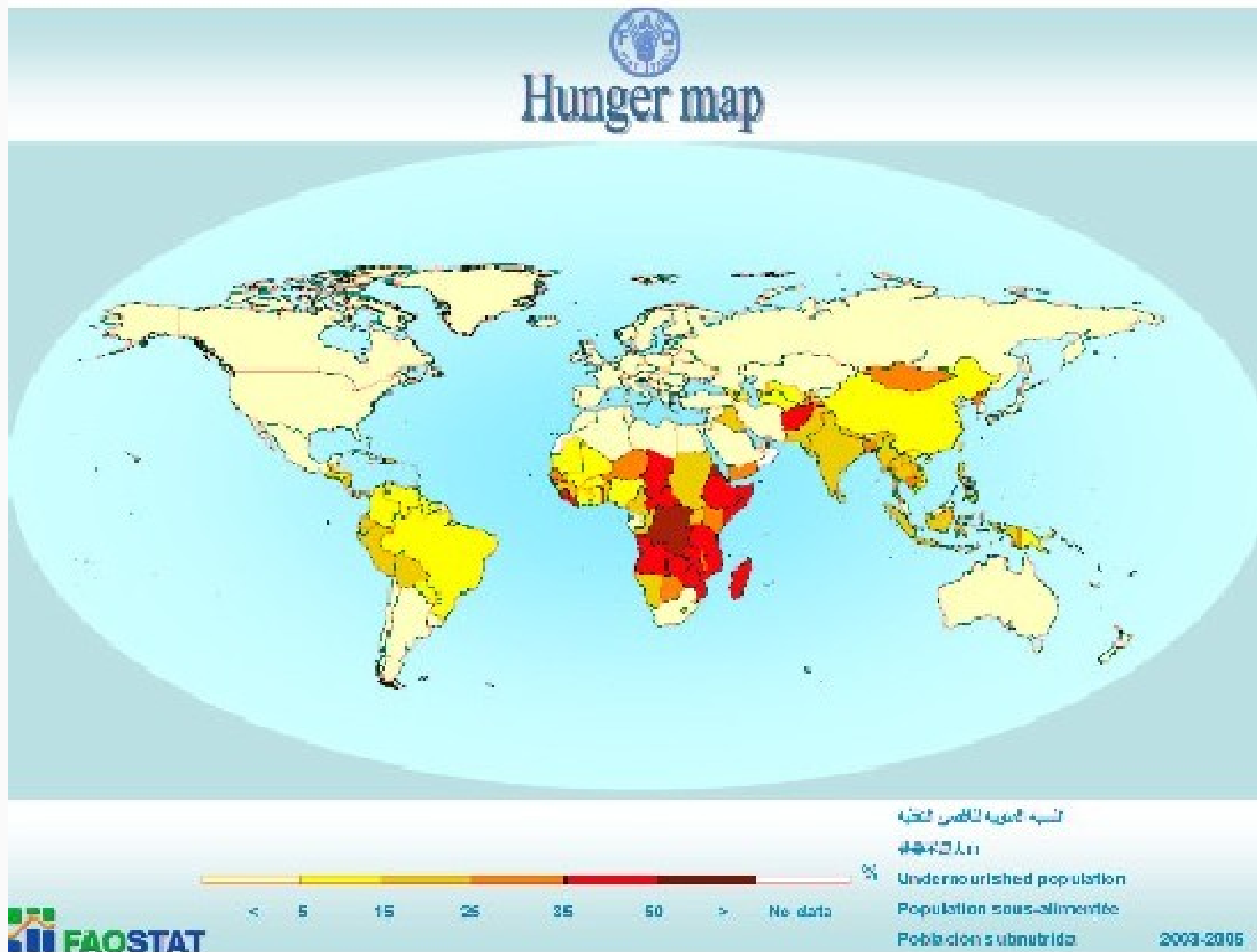
World Food Production

- Total world grain production continues to grow and is adequate to feed the world's population if distributed equitably
- Worldwatch Institute calculation based on world food production in 2004 of 2,049 billion tons
 - Providing 322 kg of grain per person per year, or about 2,700 calories per person per day worldwide
 - This exceeds the 2,350 calorie minimum per day set by FAO
 - Adequate food is available to feed all the world's people
- In addition to inequitable distribution, there are now new threats to the food supply
 - Using prime agricultural land to grow crops for biofuel
 - Climate change

Hunger in a World of Plenty

- Current world population is 6.7 billion and growing
 - One-fifth of the world's people (or 1 billion people) are undernourished or underweight
 - More than 5 million children die of hunger each year (one child every 5 seconds)
- Meanwhile ...
 - One-fifth of the world's people (1 billion people) suffer from diseases of over-nutrition, such as obesity, diabetes, and heart disease
 - ▶ Such over-nutrition occurs mostly in more developed countries and, increasingly now, among the urban elite in developing countries

FAO World Hunger Map



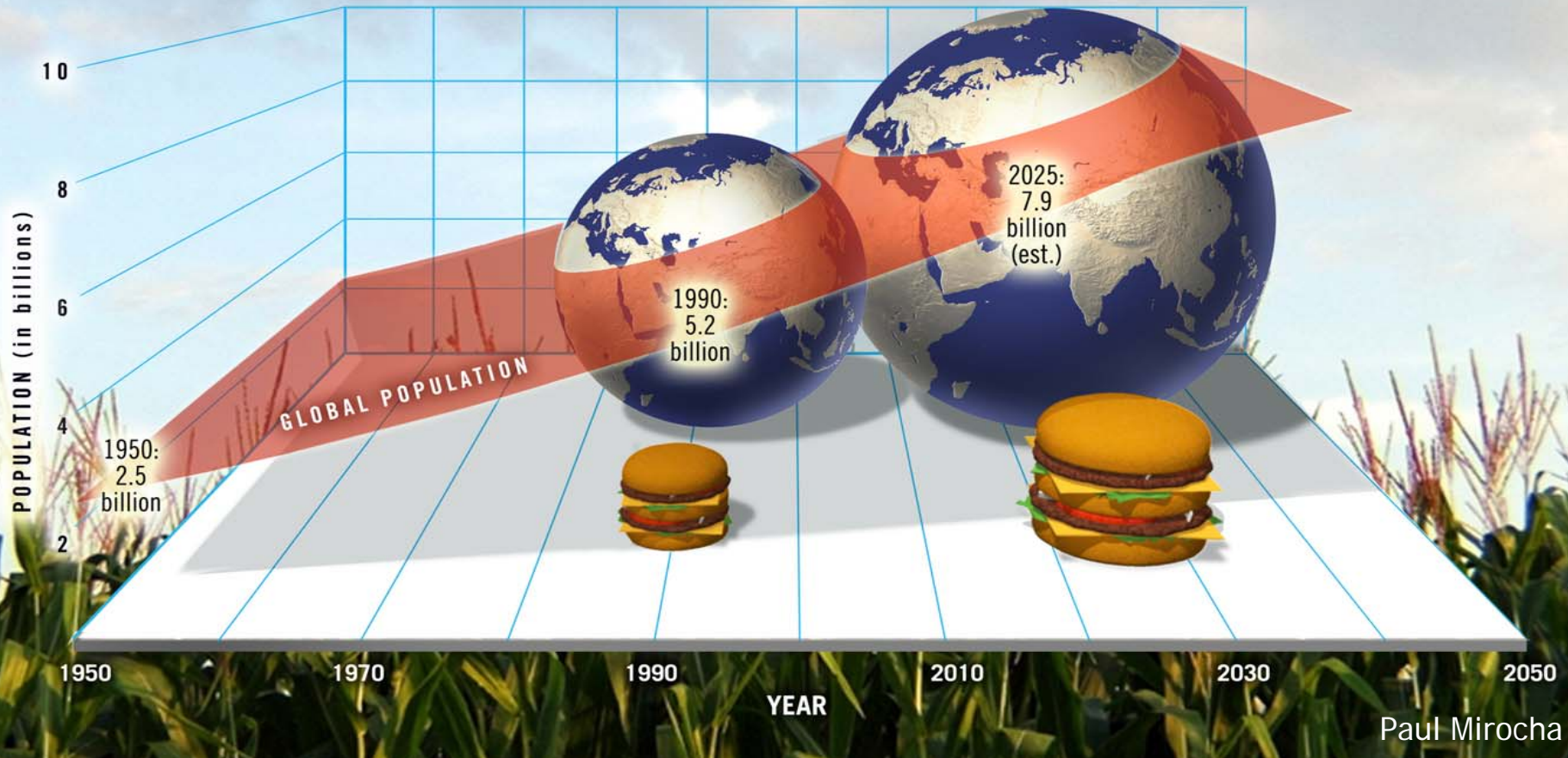
<http://www.fao.org/es/ess/faostat/foodsecurity/FSMap/map14.htm>

Since Food Is Available, What Is the Problem?

- Grain consumption per capita per year varies greatly across the world

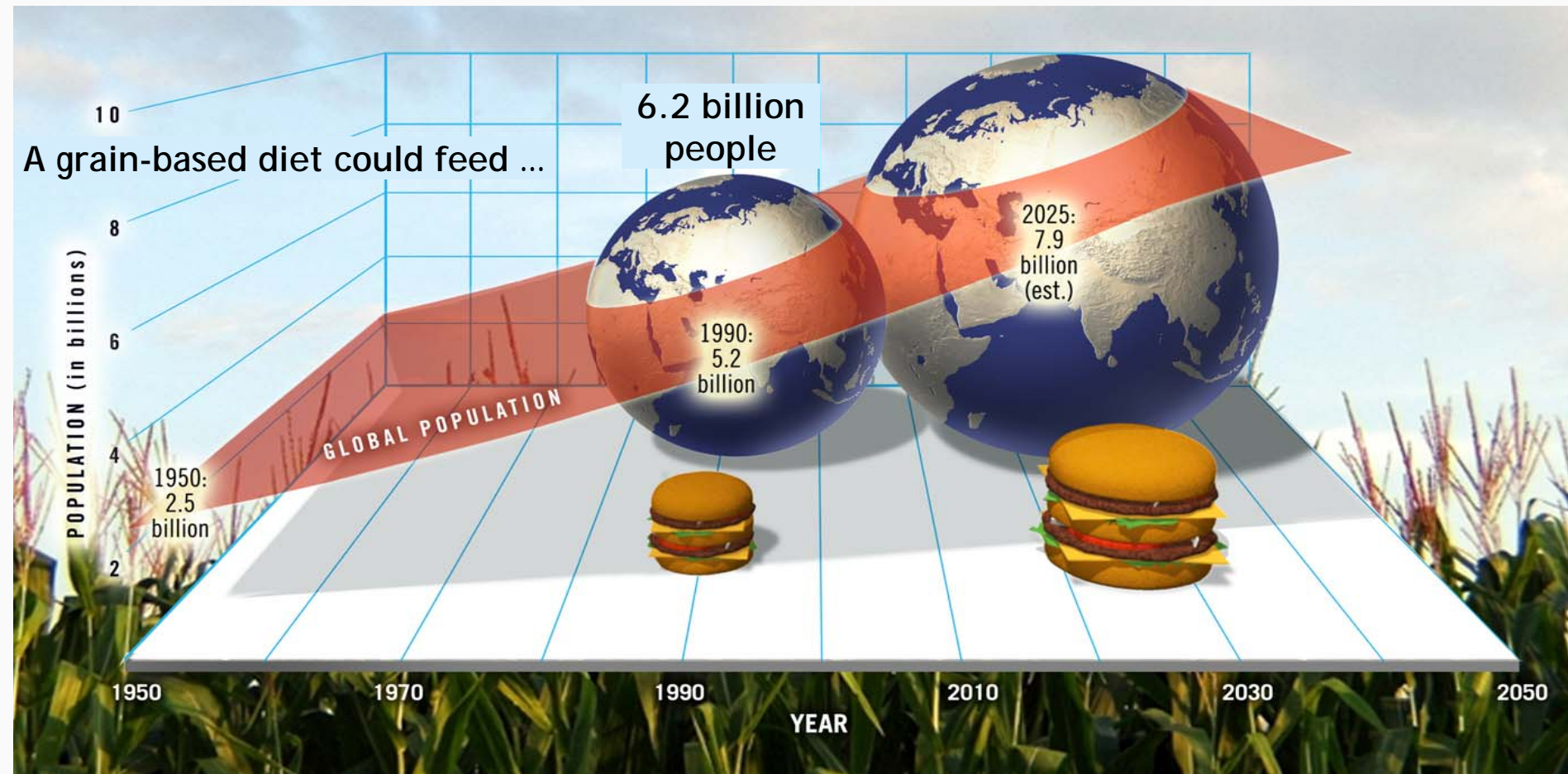
U.S.A.	~800 kg
Italy	~400 kg
Taiwan	~300 kg
China	~250 kg
India	~200 kg

Plant-Based Diets vs. Diets with Animal Protein

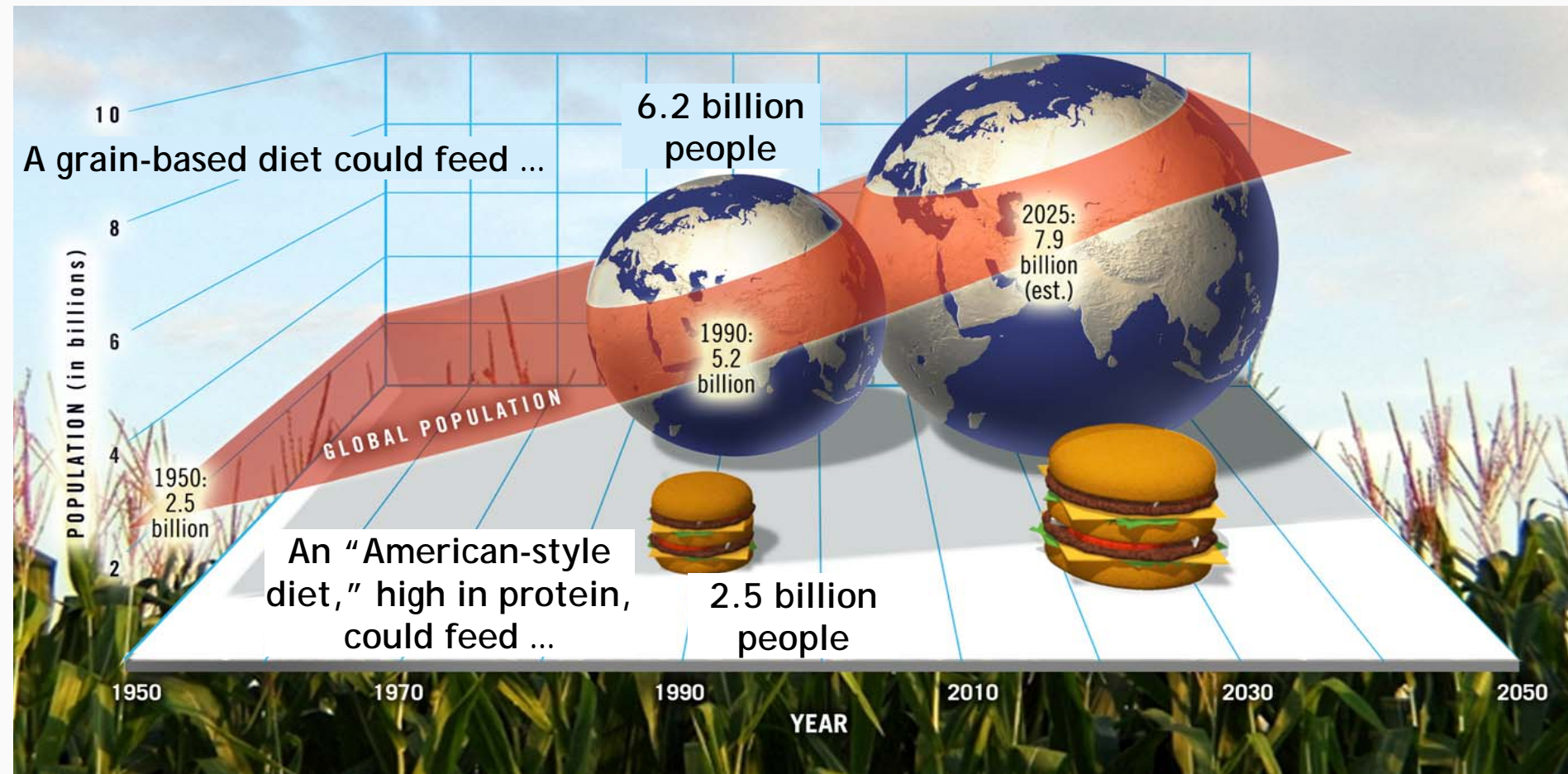


- Height of red plane = actual world population to 2004, then estimated to 2050
- Height of each hamburger = number of people that could be fed on a diet with 30 percent of calories from animal protein
- Height of each globe = number of people that could be fed on a plant-based diet in 1990 and 2020

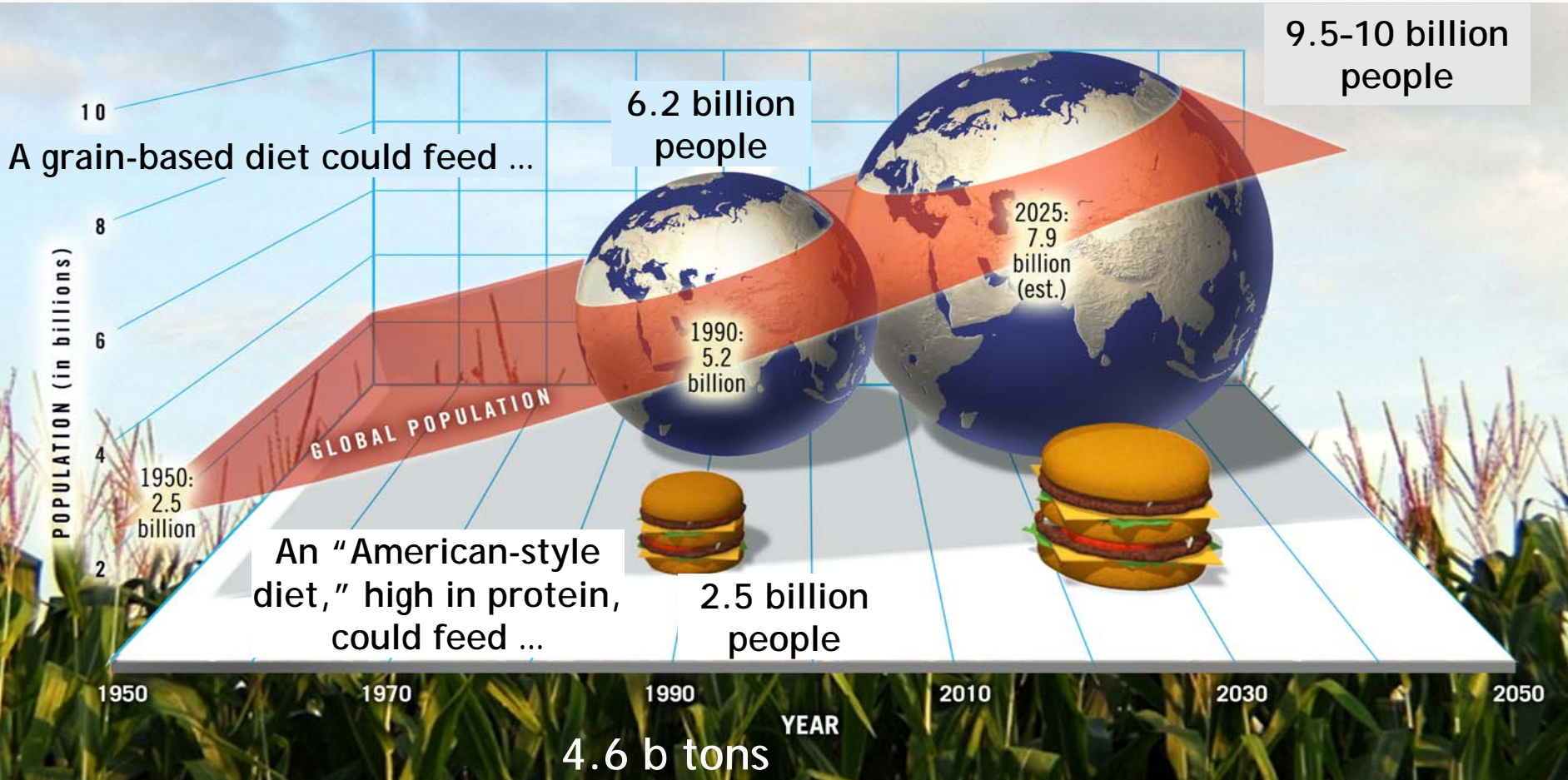
Plant-Based Diets vs. Diets with Animal Protein: 1990



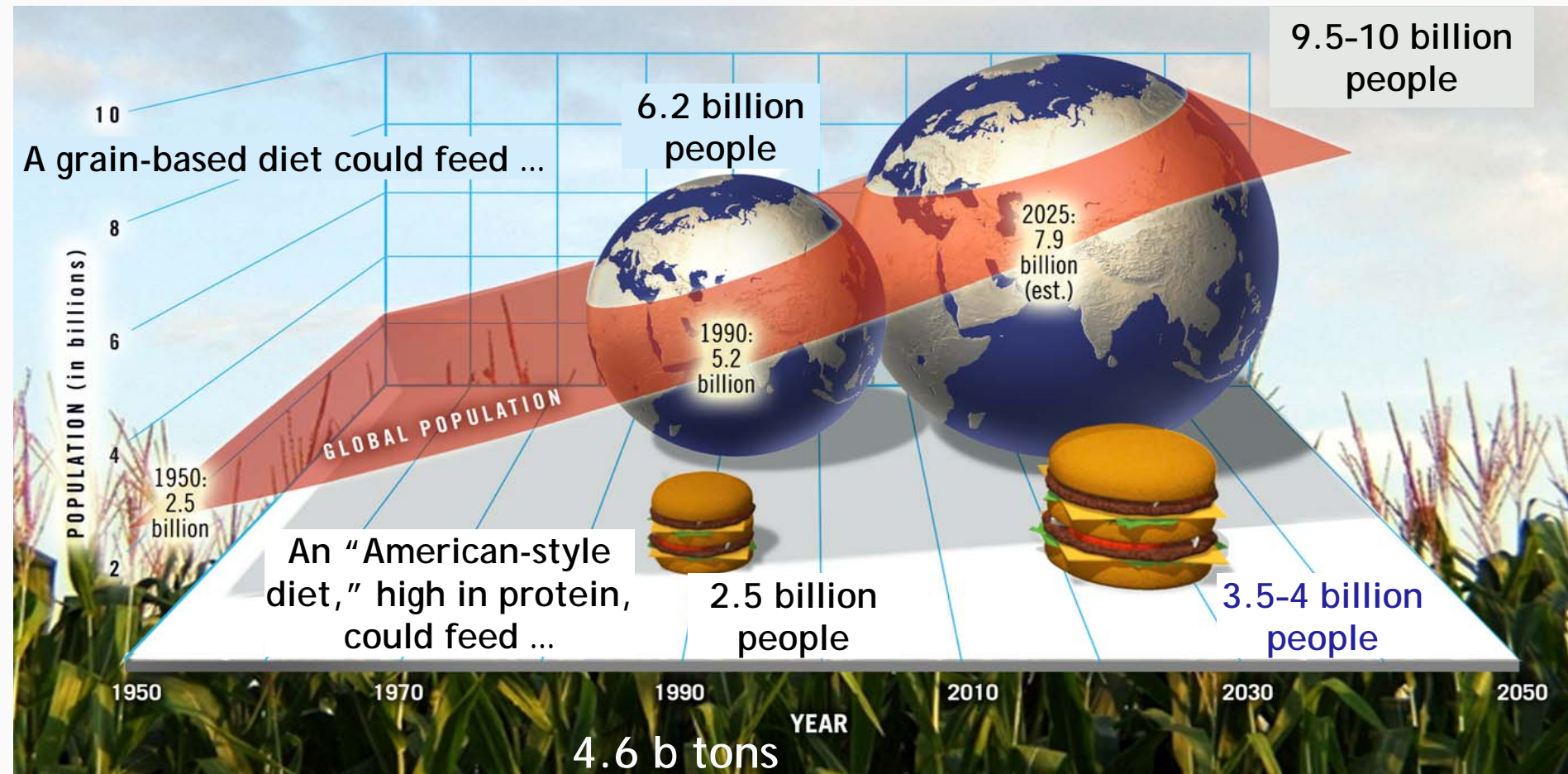
Plant-Based Diets vs. Diets with Animal Protein: 1990



Plant-Based Diets vs. Diets with Animal Protein: 2025



Plant-Based Diets vs. Diets with Animal Protein: 2025



	1990	2025
Actual population	5.2 billion	7.9 billion (est.)
Grain-based diet could feed	6.2 billion	9.5-10 billion
American-style diet could feed	2.5 billion	3.4-4 billion

To Recap, Food Security Exists When ...

- ... all people at all times (*equity now and in the future*)
- have physical access (*food is available to buy or produce*)
- and economic access (*food is affordable*)
- to sufficient safe and nutritious food (*quantity and quality are adequate*)
- to meet their dietary needs (*adequate for health*)
- and food preferences (*food that is personally acceptable and culturally appropriate*)
- for an active and healthy life (*meets health and activity needs*)
- ... and that food is produced in ways that are environmentally sustainable (*i.e. do not deplete or pollute resources such as soil, water, and seed stocks*) and socially just (*fair to those who produce the food*)

How Does This Get Accomplished?

- Goals of the 2008 UN food meeting to address the crisis of increasing food prices due to competition for grain (for biofuels, meat production, and human consumption) plus impact of climate change
 - Increase food production
 - Increase agricultural research
 - Institute policies to decrease food prices
 - Lower trade barriers

National, Regional, and Local Food Security

- National food security
 - Re-establish national food self sufficiency—captured in the concept of *food sovereignty*, the right of peoples and sovereign states to democratically determine their own agricultural and food policies
- Local and regional food security
- Household food security

Conclusion of Introduction

- Center for a Livable Future vision
 - As the world's population and consumer demand continue to grow, there is urgent need to improve human health, prevent disease, and meet basic needs for food, water, and shelter equitably for all people
 - The challenge of our time is to meet these goals as population increases while protecting the environment, preserving biodiversity, and conserving finite resources to meet the needs of future generations

