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Syngenta and Sustainability: Implications for Corporate Strategy

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*Poster prepared for presentation at the Agricultural & Applied Economics Association 2010 AAEA, CAES,
& WAEA Joint Annual Meeting, Denver, Colorado, July 25-27, 2010*

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Motivation

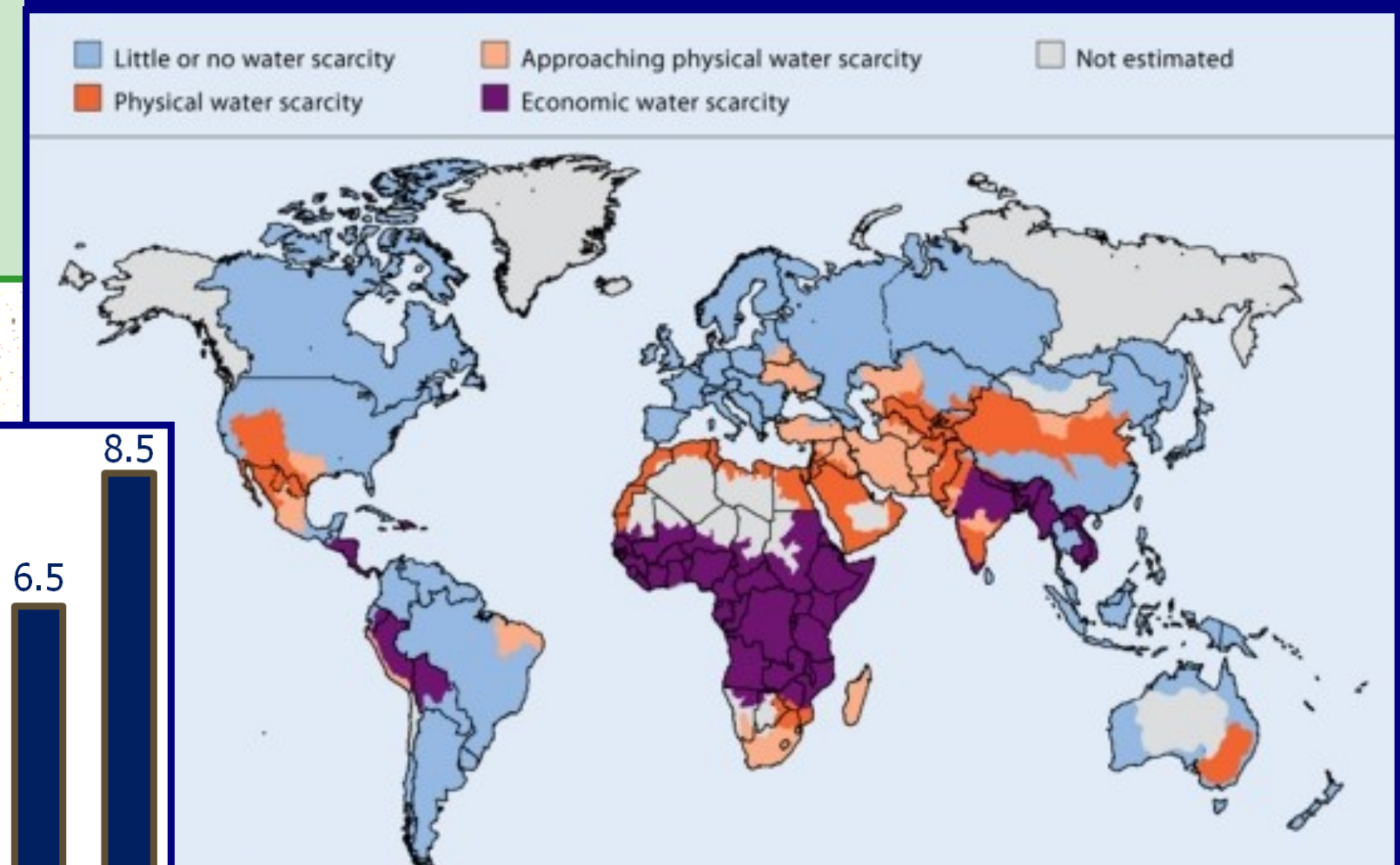
This poster was inspired by a case study developed by Syngenta, a global crop protection and seed company, in collaboration with Purdue University. As a company dedicated to promoting innovation, delivering value, and being a leader in its industry, Syngenta faces both challenges and opportunities with respect to the sustainability debate. This poster presents the major issues of sustainability in a global context, in an agribusiness context, and finally in the specific case of Syngenta. The concluding discussion represents the perspectives of a group of agribusiness professionals that discussed this case study in an executive education program on the Purdue University campus.

Agriculture's Capacity Challenges

Agriculture, and agribusinesses that are closely tied to the land, its resources, and its people, face a number of challenges and opportunities in the 21st century that revolve around promoting sustainability and ensuring a secure food supply. **Major environmental, social, and economic challenges include:**

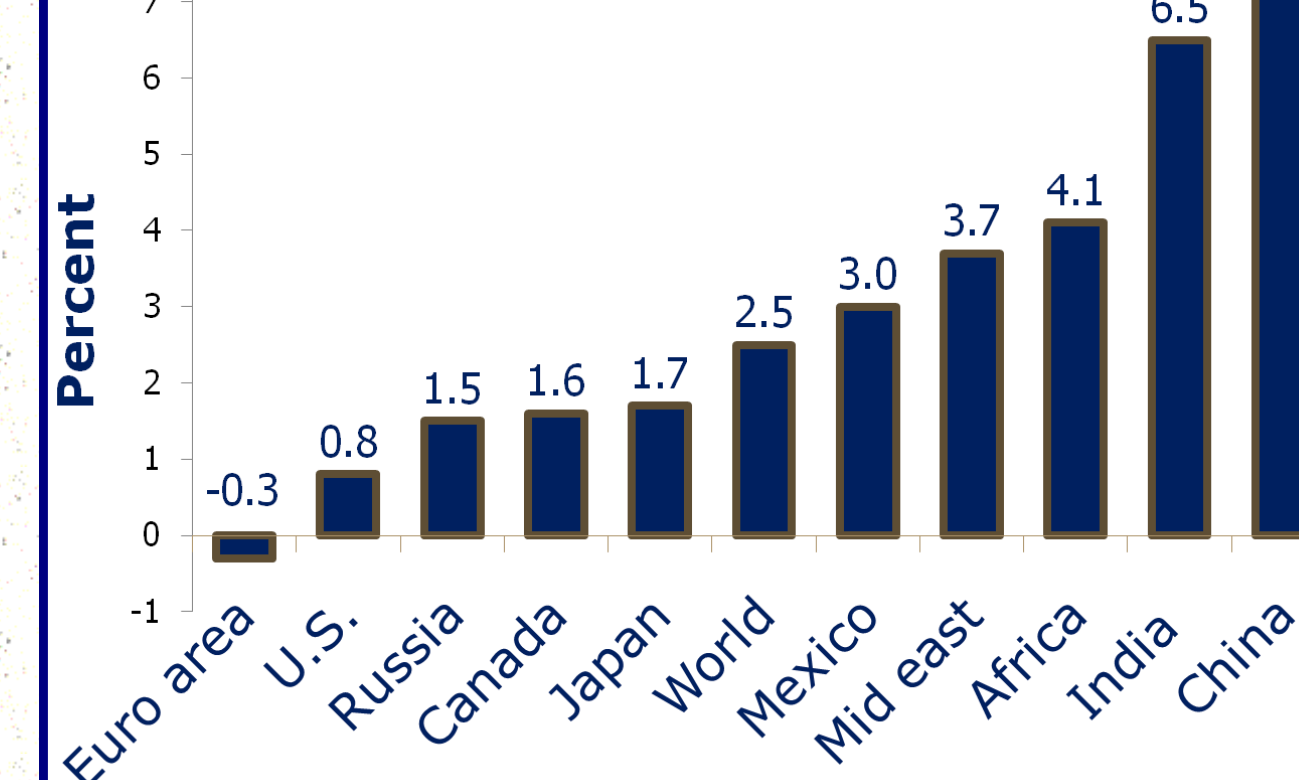
- **Population growth**—population expected to reach 9 billion people by 2050
- **Land availability**—limited "new" land means capacity must come from productivity growth
- **Water availability**—agriculture is responsible for 70% of total water consumption but water quality, quantity, and distribution are limited (see **Figure 1**)
- **Plant nutrient availability**—agriculture uses non-renewable and energy intensive resources
- **Economic growth**—higher incomes increase demand for goods (see **Figure 2**)
- **Nutrition and malnourishment**—over 1 billion people in the world are malnourished, and that number is growing

Figure 1. Areas of Water Scarcity



Source: International Water Management Institute (2006)

Figure 2. Real Economic Growth Rates in 2010



Source: International Monetary Fund (2010)

Forces Driving the Sustainability Debate

Sustainability initiatives have become a global megatrend, and society has increasingly turned to agribusiness in addition to government as a major source of sustainable solutions.

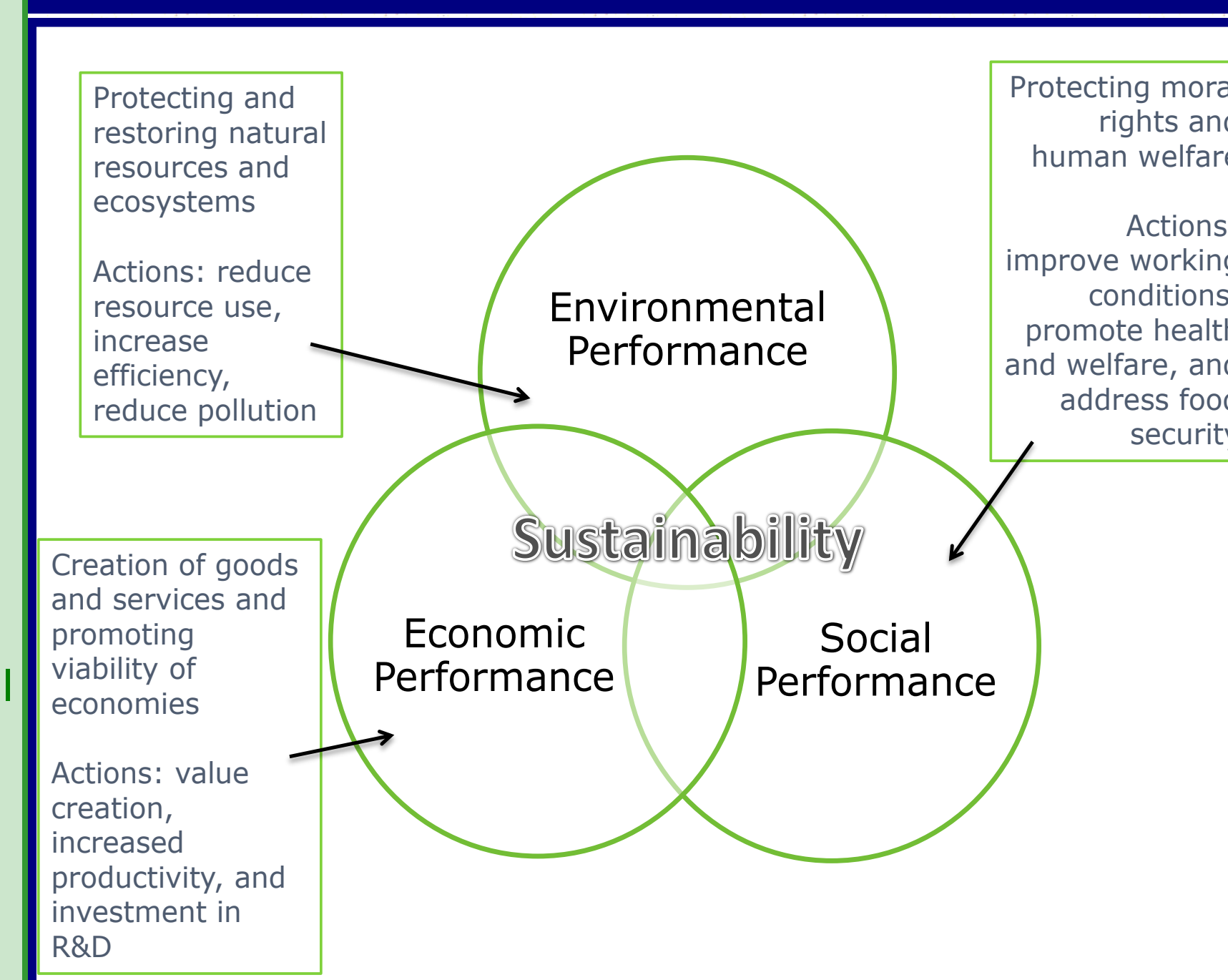
There are 5 major forces shaping the sustainability practices of companies:

- **Stakeholders**—groups such as consumers, shareholders, and employees influence a company's reputation and freedom to operate
- **Markets**—ability to create value depends heavily on public perceptions of quality, safety, and health
- **Science & Technology**—science is required to accurately measure impacts, but technology is often seen as both a cause and a solution to sustainability issues
- **Policy**—regulations as well as incentives from government induce company action
- **Supply Chain Partners**—demands for transparency encourage tightly aligned chains, but there is often an unequal distribution of costs and benefits

Sustainability from the Agribusiness Perspective

Companies that collectively pursue environmental, social, and economic goals adopt a **"triple bottom line"** approach to business. Sustainable companies are expected to limit natural resource use and environmental damage, increase efficiency, improve labor relations, address food security and income inequalities, and respond to the needs of legitimate stakeholders, all while remaining profitable and competitive in the marketplace. This balance is depicted in **Figure 3**.

Figure 3. The Three Aspects of Sustainability



Syngenta's Approach to Sustainability

The Company: With 24,000 employees & operations in 90+ countries, Syngenta is a world-leading crop protection & seed company committed to sustainable agriculture—farming with future generations in mind.

Sustainability Program:

"Grow More for Less."

- Science & technology viewed as essential elements of sustainability solution—substantial overlap between productivity gains and sustainability (see **Figure 4**)
- Dedication to outcome-based metrics rather than practice-based standards
- Sustainability viewed as source of value creation; in North America, focus is on value through revenue and freedom to operate (see **Figure 5**)

Figure 4. Overlap Between Productivity & Sustainability

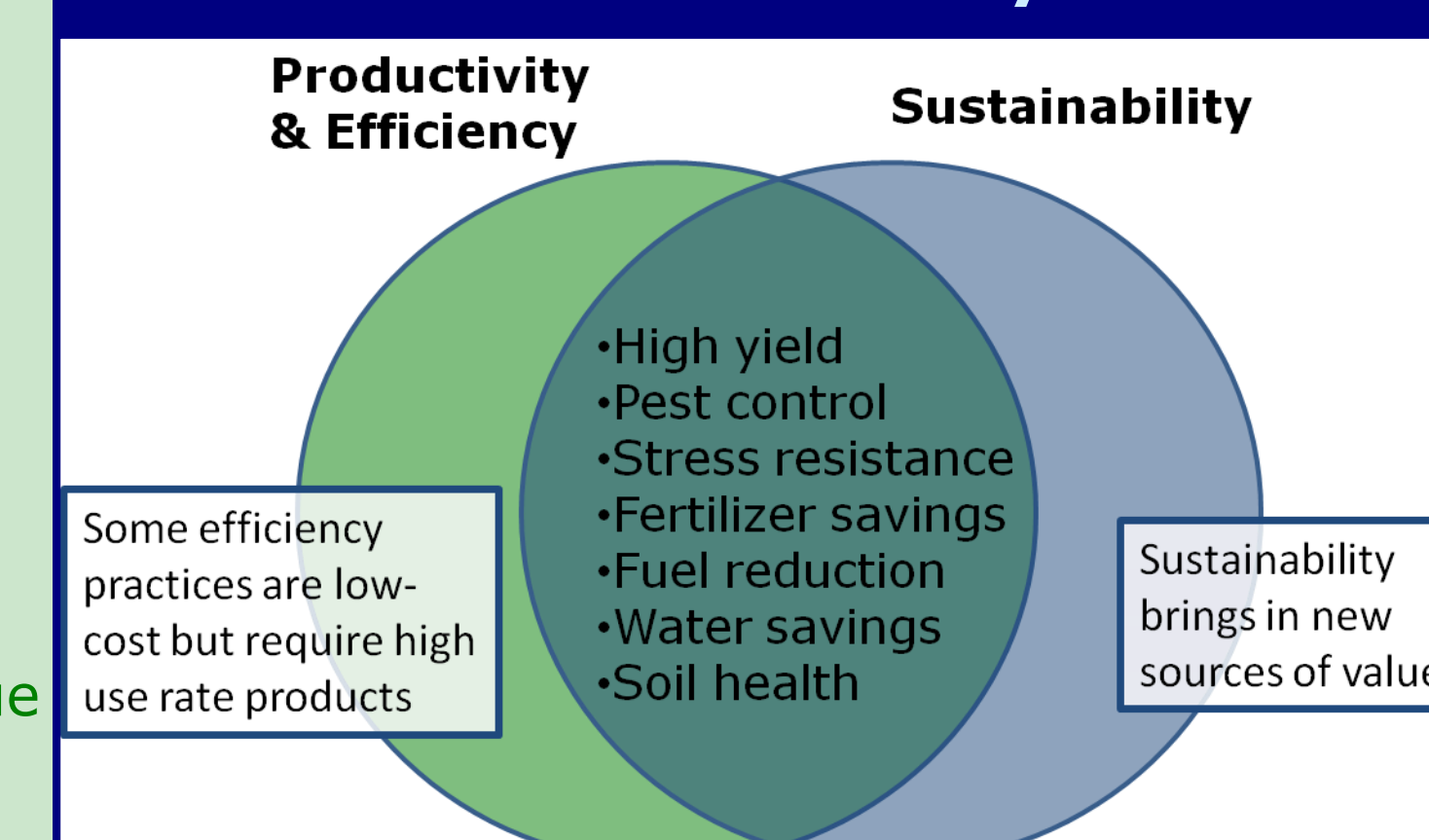


Figure 5. Sources of Value Derived from Sustainability



Sustainability Progress: Exploratory Stages

- Analyzing environmental footprint of agricultural systems
- Studying options for diversity of portfolios & markets
- Engaging in fast learning through small, focused pilot studies to gain insight prior to significant investments

Collaboration: Field to Market Initiative (Keystone Alliance)

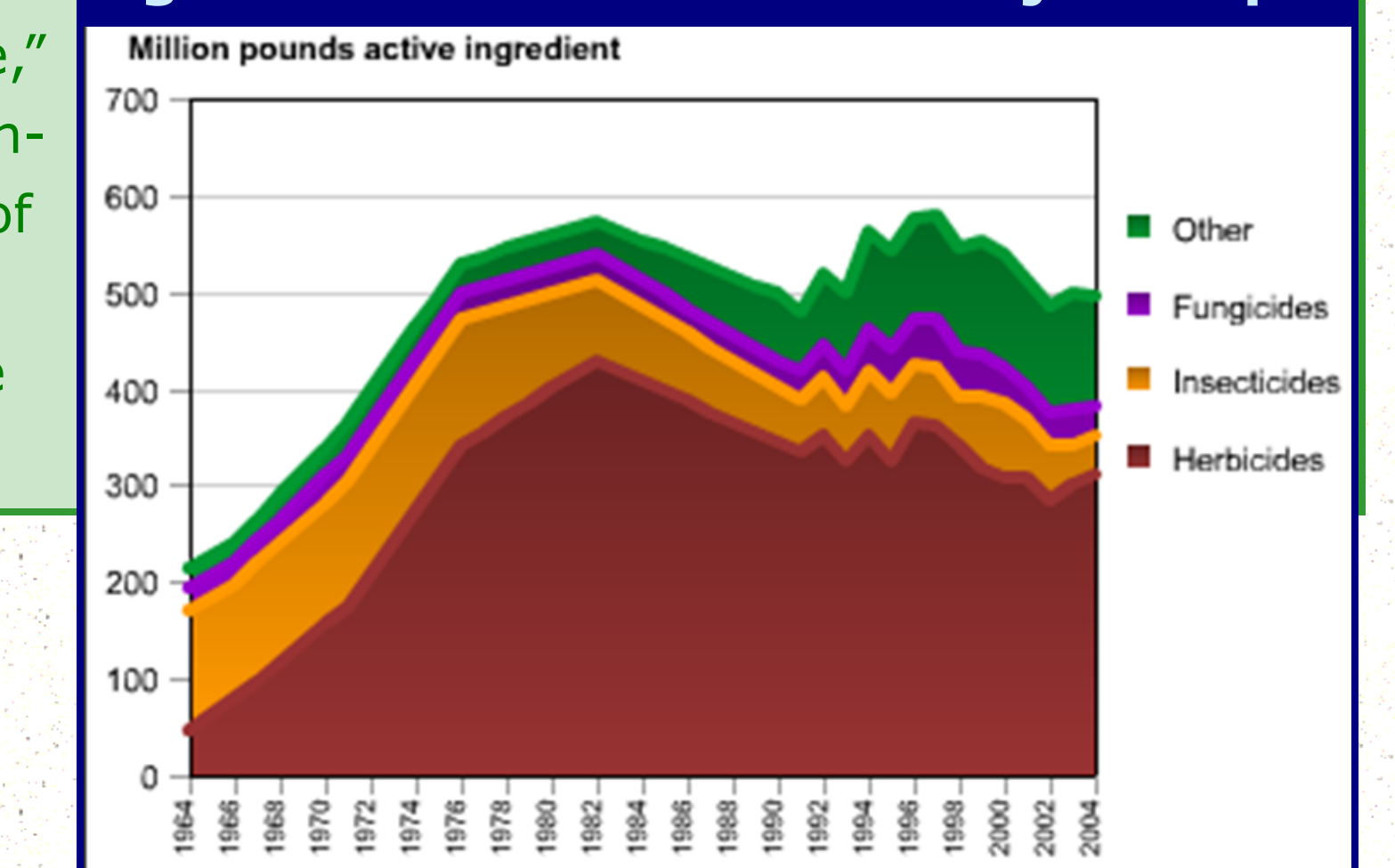
- Organization of stakeholders in the agriculture & food supply chain
- Operating principles of transparency & inclusiveness
- Goal to meet future food, fiber, & fuel challenges and to develop a comprehensive set of science-based sustainability indicators

Discussion among Agribusiness Professionals

In a facilitated discussion at an agribusiness executive seminar at Purdue University, roughly 60 executives shared their insights on Syngenta's approach to sustainability and the implications sustainability has for all agribusiness companies. **Highlights of the discussion:**

- **Education is the key to sustainability.** Companies, governments, and educational institutions must educate individuals and societies about sustainable practices in order to move closer to developing uniform definitions and performance metrics for sustainability.
- **Marketing has the power to define what is sustainable** due to proximity to the final consumer, but producers control the sustainability of the supply chain.
- **Perceptions of sustainability are inconsistent** among individuals, companies, and society. For example, some think organics are sustainable while others believe genetically modified products (GMOs) are the only solution to feeding the world.
- **Companies need to address both short term and long term value creation.** Shareholders demand immediate financial returns, but sustainability creates indirect value such as improved brand equity and freedom to operate in the long run.
- **It is important to be involved in the sustainability discussion.** "The fringe," a small yet vocal group including environmentalist groups influence a large part of the debate, but it is companies with resources and capabilities that will be able to introduce sustainable solutions.

Figure 6. Pesticide Use on Major Crops

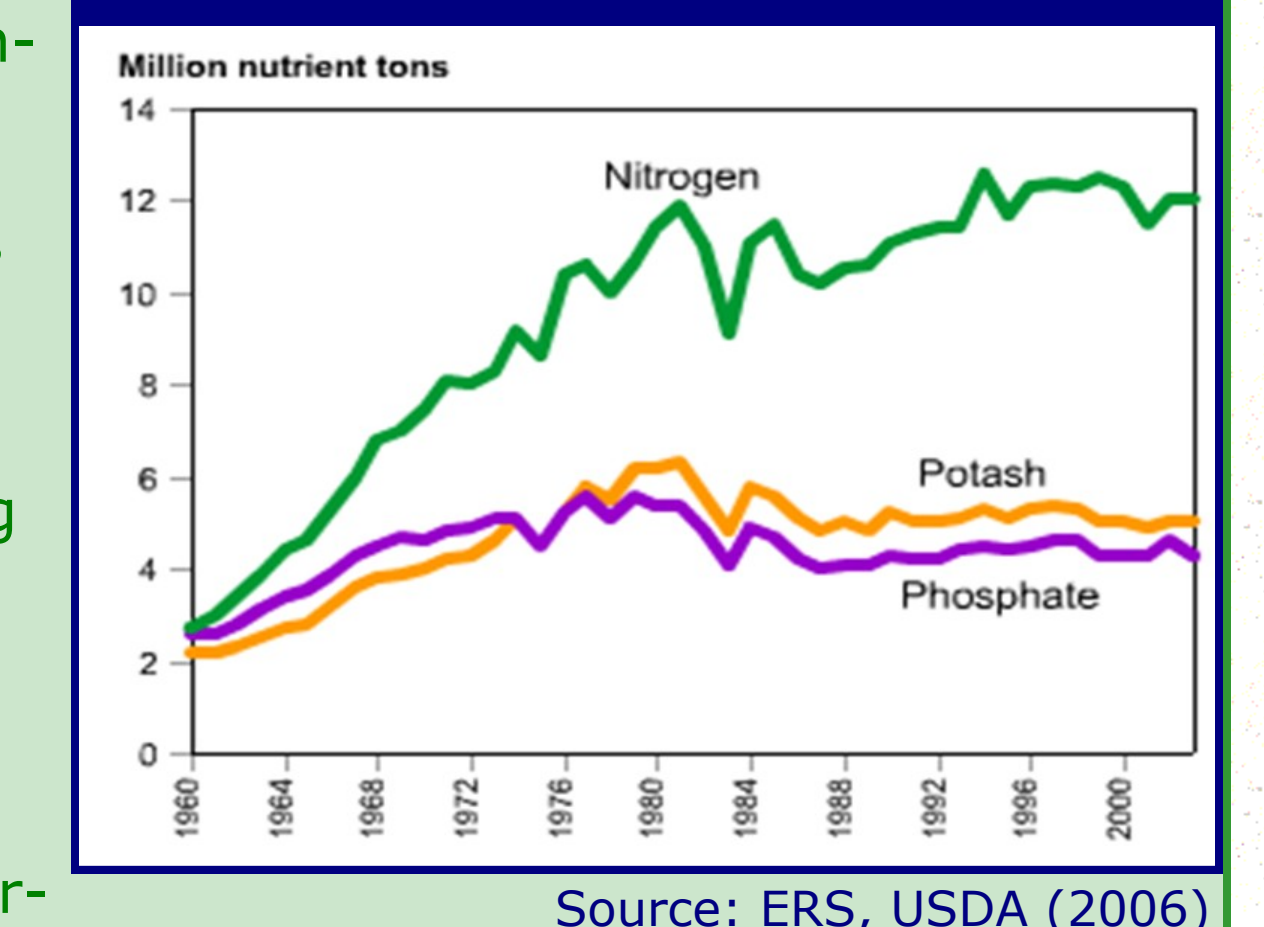


Conclusions

The specific case of Syngenta and the broad view of agriculture provide a number of insights into sustainability in the agriculture and food supply chain:

- **In many respects, agriculture and companies such as Syngenta have always been sustainable**—constantly focused on improving efficiency, reducing waste, protecting the land, and delivering value (see **Figures 6 and 7**).
- **However, the focus is generally on the environmental and economic aspects of sustainability rather than the social aspect**—social performance is the most difficult to observe and measure.
- **Perceptions and values of sustainability not only vary by individual and organization**—they shift over time as constraints change and information evolves.
- **There is no one way to define or measure sustainability**—success will ultimately depend on the ability to convey progress and value to stakeholders in a meaningful way.

Figure 7. Consumption of Fertilizer



Source: ERS, USDA (2006)

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