The wave of global hunger

In the year 2050, world population will require 100% more food,\(^1,2\) and 70% of this food must come from efficiency-improving technology\(^3\)

The Three Rights: Food, Choice, Sustainability
“When farmers increase their productivity, nutrition is improved and hunger and poverty are reduced.”

– Bill Gates, Gates Foundation January 2011 annual letter

“All lives have equal value…”

Technology - practices, products, genetics

The Three Rights: Food, Choice, Sustainability
Global Population Increases

206,500 Daily
Another Philadelphia Every Week

Source: U.S. Census Bureau
Global Population Increases

6.3 Million Monthly

Los Angeles

Chicago

Source: U.S. Census Bureau
Rising Demand for Meat

• 3 billion people trying to move into middle class in emerging economies, driving meat demand

• Can we have economic stability without food security?
Technology enables three rights

A Time for Action
Access to safe, proven, efficiency-enhancing technologies ensures:

THE THREE RIGHTS

1. Food
   a basic human right
2. Choice
   a consumer right
3. Sustainability
   environmentally right

The Three Rights: Food, Choice, Sustainability
Food, a basic human right
"Hidden hunger" in industrialized nations affects 1 in 5.
"I have a dream to provide every Chinese, especially children, sufficient milk each day."

Wen Jiabao, Chinese Premier, 2007

The Three Rights: Food, Choice, Sustainability
"I have a dream to provide every Chinese, especially children, sufficient milk each day."

Wen Jiabao, Chinese Premier, 2007

- It would take 4 more U.S. dairy industries to provide China access to half as much calcium as Americans

100g $\rightarrow$ 300g = 36M cows (with current production levels)
## Technology Provides Affordable Food

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent of Income Spent on All Food</th>
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Source, USDA, 2007
## Technology Provides Affordable Food

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Source, USDA, 2007
Technology Has Been Vital for Dairy Productivity Improvement

Technology helps today’s farmers produce 58% more milk from 64% fewer cows than in 1944.

Choice, a consumer right
Choice: A Consumer Right
Do Consumers accept Technology?

Technology + Choice

The Three Rights: Food, Choice, Sustainability
Public Issues
Who knows where our food comes from?

**Less than 2%** of the U.S. population is directly involved in production agriculture.
The Human Animal-Bond: What is our orientation?
The Human Animal-Bond: What is our orientation?
The Human Animal-Bond: What is our orientation?
Choice, a consumer right

The International Consumer Attitudes Study (ICAS)

- 28 studies
- 26 countries
- Over 97,000 consumers
- 2001 – 2010

Opinion polls

Spending data

The Three Rights: Food, Choice, Sustainability
ICAS: Lifestyle buyer

The International Consumer Attitudes Study (ICAS)

Opinion polls

""

Spending data

95% Food Buyer
- Taste
- Cost
- Nutrition

99%

4% Lifestyle Buyer
- Luxury/Gourmet
- Organic/Local
- Gardens

The Three Rights: Food, Choice, Sustainability
“You have to be rational. There’s no way you can support life on earth if you go straight from farm to table.”

“It sounds good. It is good.” But, “it’s a privilege. We also have to think of the world food supply.”

“Bio” products have 30% less yield than normal agriculture and wouldn’t allow us to feed the world today.”

Source: Fast Company, Aug 21st, 2011;
Case study: U.K.

- Historically major food producer and exporter
- Past decade EU policies limited tech access, resulting in...

- Meat imports: 389%
- Farm incomes: 71% (1995-2001)
- Dairy imports: 132%
- Lost farmers and farm workers: 60,000 (1998-2001)
Sustainability, environmentally right
“To feed 9 billion people and maintain the planet, we must freeze the footprint of food.”¹

– Dr. Jason Clay,

World Wildlife Fund
• Each pound of beef produced in the U.S. today requires
  – 14% less water
  – 34% less land
• Compared to 1944, for every gallon of milk today cows generate:
  – 63% smaller carbon footprint¹
The Benefits of Technology

60 Years, 250%+ Output, Same Input

The Future of Technology

• To freeze the food print of livestock, production new technology will:
  – improve animal welfare
  – prevent and control disease
  – improve nutrient utilization in the animal
  – enable improved nutrient digestibility in livestock

• This new technology results in improved animal productivity, which reduces the environmental impact of livestock production
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<tr>
<th><strong>Our Message</strong></th>
<th>Technology equals safe, affordable and abundant food</th>
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<tr>
<td><strong>Our Team</strong></td>
<td>Elanco/Lilly 35,000 employees: Pride and Engagement</td>
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<tr>
<td></td>
<td>• 100,000 families</td>
</tr>
<tr>
<td></td>
<td>• 10,000 days</td>
</tr>
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<td></td>
<td>• Home city: child-free hunger</td>
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<td><strong>Our Target</strong></td>
<td>Food 500: Attempt to influence</td>
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<td><strong>Our #1 Priority</strong></td>
<td>Innovate!!</td>
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<td><strong>Vision</strong></td>
<td>Food and companionship enriching life</td>
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*The Three Rights: Food, Choice, Sustainability*
1. **Choice** must reign Globally, for the 99%!
   – Taste, Cost, Nutrition are Most Critical

2. We **can’t over react** to the fringe (1%?)

3. **Technology enables 3 rights** – food, choice, and sustainability

4. Let the **regulatory bodies** make the ultimate safety and market access decision.

5. **We must influence the “500”**
   – Leadership, collaboration, protecting choice
Join the Dialogue

Plenty to Think About
The thinking person's guide to feeding a hungry planet

The problem?
Doubling world food production by 2050.
The solution? You tell us.
Join some of the best and brightest minds in the world as they share their thoughts, solutions and perspectives on feeding a growing world.

www.PlentyToThinkAbout.org

Safe, affordable, abundant food: a global reality?

efficiency

Technology:

FOOD
a basic human right

CHOICE
a consumer right

The Three Rights: Food, Choice, Sustainability
The Three Rights: Food, Choice, Sustainability

Making safe, affordable & abundant food a global reality

Thank You!!