Global Challenges, Global Opportunities

In 50 years, the world population will require...

100% more food, and...

70% of this food must come from efficiency-improving technology.
Think about it...

“To feed our growing global population, we will have to produce the same amount of food in the next 40 years that we previously produced in the last 10,000 years.”

Quote:
Norman Borlaug (father of the modern Green Revolution)
Increasing Complexity

**Food Safety/Food Security**
- Disease Prevention & Control
- Traceability
- Shortage

**Animal Well-Being**
- Optimized Health
- Proper Care-Caged, not caged, Free Range

**Improvements in Information Technology**

**Production**
- Organic/Natural/Conventional
- Waste Reduction

**Environment**
- Best Management Practices
- Land Availability/Urbanization
- Water
Vision
To help feed the world affordable, wholesome food and achieve a higher quality of life.

Mission
Make a clear difference in sustainably meeting the growing global needs for nutrition and health.
Our Global Footprint
Thank You!

Merci

Obrigado

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Благодаря ви

Asante sana

谢谢你

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cảm ơn lắm
Addendum

• Using technological innovations to feed a growing world
During the course of this presentation...
60 babies will be born in the U.S.

244 babies will be born in China

351 babies will be born in India
In the 20th century the world's population tripled.
The use of water grew 6x.
Global Challenges, Global Opportunities

In **50** years, the world **population** will require...

100% more **food**, and...

70% of this food must come from efficiency-improving **technology**.
A Dynamic and Changing World: Population

Income distribution impacts meat consumption
Each quintile represents 1.2 billion people

<table>
<thead>
<tr>
<th>Income Per Capita (US$)</th>
<th>Broiler Per Capita Consumption (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000</td>
<td>26</td>
</tr>
<tr>
<td>8,000</td>
<td>19</td>
</tr>
<tr>
<td>3,500</td>
<td>9</td>
</tr>
<tr>
<td>1,500</td>
<td>4</td>
</tr>
<tr>
<td>730</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Dr. Paul Ahe
A Dynamic and Changing World: Income

Total Meat Consumption & Per Capita Income

Source: FAO, 2009
Mega Supply and Demand Drivers

FAO: FOOD DEMAND DOUBLE BY 2050
A Dynamic and Changing World: Choice

% of Meat Consumption in Selected Countries
We are Facing Complex Questions & Issues

**Food Safety/Food Security**
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**Improvements in Information Technology**
The emerging worldwide water shortage is serious.
More Efficient Use of Water is a Must!
Cutting Food Waste to Feed the World

- Every year, **one third** of food produced in the world for human consumption gets **lost or wasted**

- It is more effective to **reduce food losses** than increase food production to feed a growing population

- **Efficient solutions exist** along the entire food chain for reducing total amounts of food loss and waste
Filling the Productivity Gap

Agricultural Productivity Gap

1.7 percent

Growth Needed
Current Growth

2010 2015 2020 2025 2030 2035 2040 2045 2050
Current Modern Technology and Technological Advances in the Future is the only way we will be able to Feed our Growing Global Population.
The First Green Revolution

“To feed our growing global population, we will have to produce the same amount of food in the next 40 years that we previously produced in the last 10,000 years.”

- Norman Borlaug
Productivity Increases Over the Past 50 Years

• In 1960, a farmer fed just 26 people.
• Today, the average U.S. farmer feeds 155 people – using less land, energy, water and fewer emissions.

Source: America’s Farmers Campaign-U.S. Farm Facts
Tremendous Genetic Evolution

Year : 1957
Time to market: 120 days
Average Weight: 1.4 kgs
Average Conversion : >3

Year : 2009
Time to market: 42 days
Average Weight: 2.6 kgs
Average Conversion : 1.7
Land to Feed California Eggs

40 million people live in California and each year they consume 10 billion eggs.

CONVENTIONAL
320 acres

<1% of San Francisco

CAGE FREE
30,000 acres

95% of San Francisco
The Drive for Efficiency in Dairy Production

![Graph showing Milk Cows, Milk Per Cow and Milk Production, 1985-2005](image)

Increasing role of aquaculture in fish consumption
Share of fish originating from capture and aquaculture in total fish for human consumption by decades
Innovations in Agriculture

• More efficient use of raw materials

• Ingredient differentiation in protein sources for animal feed

• Technologies to address water resource concerns

• Increased consciousness of climate issues among protein producers