

# AGRIBUSINESS MEGATRENDS

IAMA

World Symposium 2009

Budapest

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Honduras



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## Antecedent

▣ **Nasbiit** Megatrends 1980s.

Women in labor force

▣ **G Becker** household production of final goods.

Impact on Agribusiness:

▣ Convenience. Time.

**Outsourcing Home Production**

Fast foods

Ready to Eat Products



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# Agribusiness Megatrends Drivers



- ▣ From the consumers' side  
(Demand)
- ▣ From the firms' side  
(Supply)
- ▣ From the Market Side  
(Institutions)

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## I. Demand Drivers

- ▣ Nine Americas and Povericum
- ▣ Hysteria and Hysteresis
- ▣ The 10 Fs of  
Agribusiness Demand

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# Demand Growth



## ▣ NINE “Americas”

Burke’s “Americums”: 350 million people income > US\$ 15,000 year  
China, India. 9 by 2020



## ▣ American lifestyle

They Demand: Fruits, Meats, Electricity, Heating and Cooling , SUVs, Hummers, etc

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# Povericum

## ▣ Rural Poverty

World Labor Force in Agriculture.

**39%**

Their Contribution to World GDP **3%**

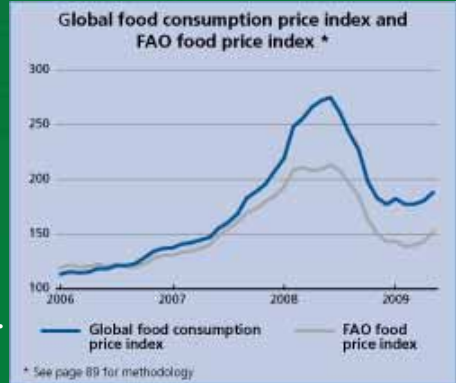
## ▣ Urban Poverty



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# Agriculture Low GDP

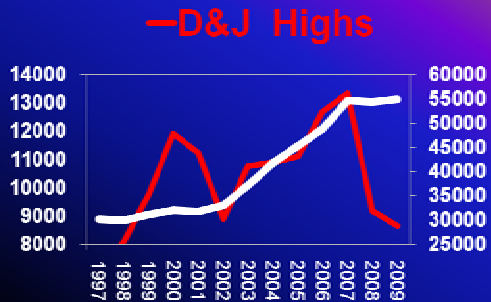
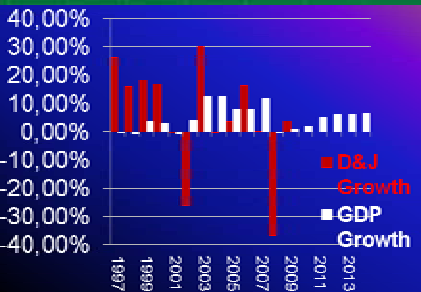
- Global Food Abundance
- Local Food Scarcities
- Low Relative Prices.
- 2008 rise in prices.
- Ratchet effect
- Urban Poor: Exports Prohibition



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# Demand and Financial Crisis

Will Financial Bubbles Reduce Food Demand? No way



Financial Hysteria

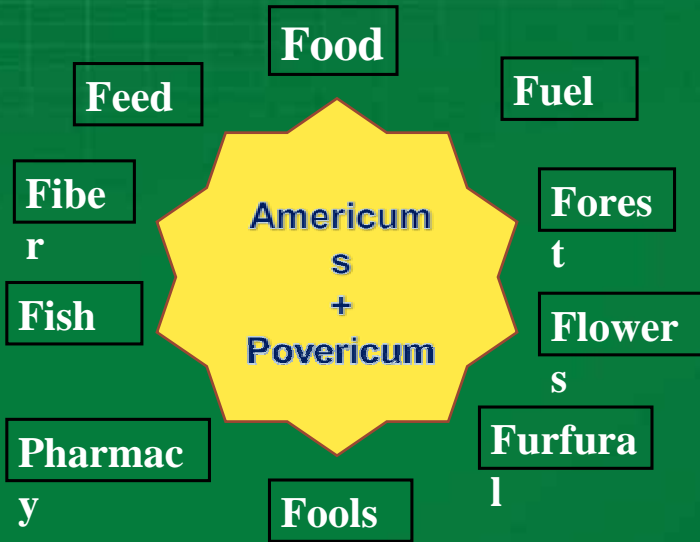
Real Hysteresis

G Law of Financial Gravity : If the price goes up above the fundamentals, it must fall down; and vice versa.

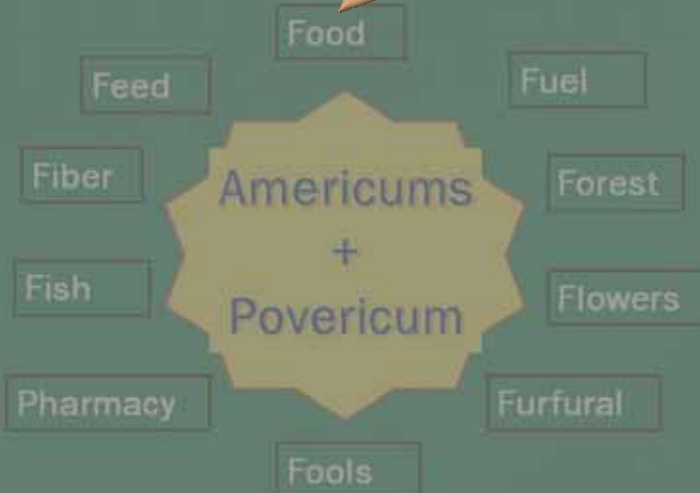
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# 10 Fs of Agribusiness Demand Competing for Fixed Resources



**Food: Meats, Fruits, Vegetables, Grains.**



10 Fs of Agribusiness Demand

**Feed: Derived Demand from Meats.**



10 Fs of Agribusiness Demand  
Competing for Fixed Resources

**Fiber: Cotton, Wool, Hemp.**



10 Fs of Agribusiness Demand

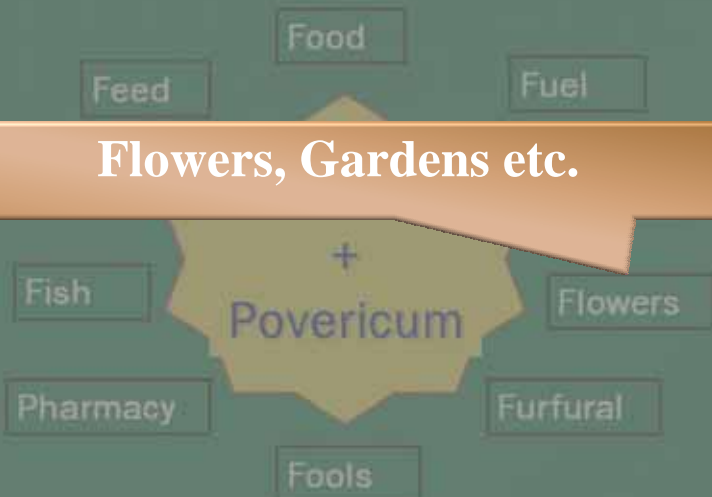
Competing for Fixed Resources

**Fuel: Gas, Diesel, Heat and Cold.**



10 Fs of Agribusiness Demand  
Competing for Fixed Resources

**Flowers, Gardens etc.**



10 Fs of Agribusiness Demand  
Competing for Fixed Resources



**Forest: Wood, Cellulose.**

10 Fs of Agribusiness Demand  
Competing for Fixed Resources



**Fish. Meat, Meal and Algae.**



10 Fs of Agribusiness Demand  
Competing for Fixed Resources

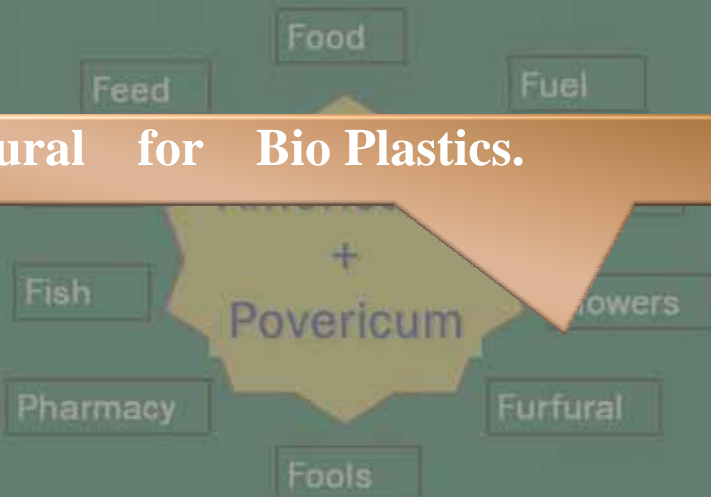
## Pharmacy: Goldberg Agriceuticals



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10 Fs of Agribusiness Demand  
Competing for Fixed Resources

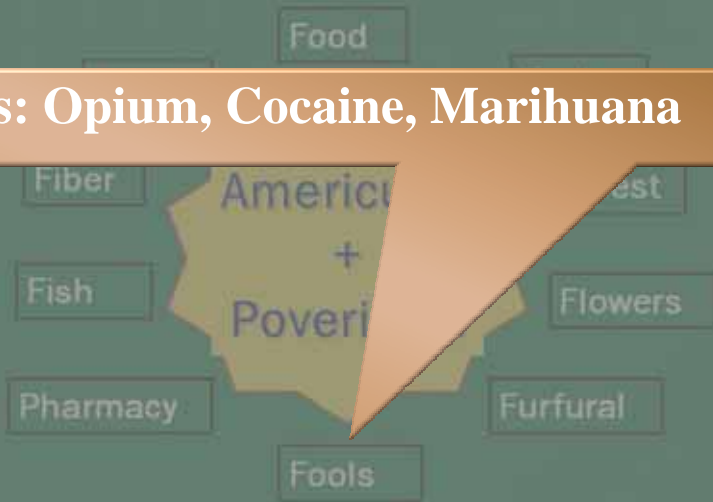
## Furfural for Bio Plastics.



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10 Fs of Agribusiness Demand  
Competing for Fixed Resources

**Fools: Opium, Cocaine, Marihuana**



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## II. Supply Side Drivers

- ▣ Climate Change, Volatility, Ke
- ▣ Protected Agriculture
- ▣ Aquabusiness and the Sea
- ▣ The Future Energy Portfolio
- ▣ Sciences Synergy
- ▣ Farm vs Firm Approach
- ▣ Countries Buying Countries



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# A Hot World and Volatility



## ▣ Gore, Friedman

Global Climate Change and Volatility

## ▣ Costs of Capital $K_e$ ,

Debt and Insurance

## ▣ Taleb Black Swan

Food Security: Increased Inventories

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## Input Output Volatility



Inputs

Expected Returns

Manufacturing

Deterministic I/O



Agribusiness

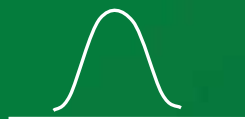
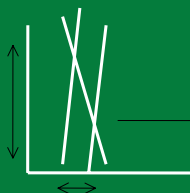
Stochastic I/O



Weather Impact



D. Inelasticity



Climate Change



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# Protected Agriculture



Animal Production. “Animal Factories”

Lower risk.

New HVAP greenhouses.

Almeria Case:

60,000 acres under roof

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Posición: 36° 43' 04.64" N - 2° 48' 21.96" W Área: 221 H Escala: 1:100000 100% Elevación: 4282 m



Posición: 36° 43' 02.32" N - 2° 48' 20.84" W Área: 221 H Escala: 1:100000 100% Elevación: 4282 m



# Aquabusiness

Efficient protein foods for human consumption.

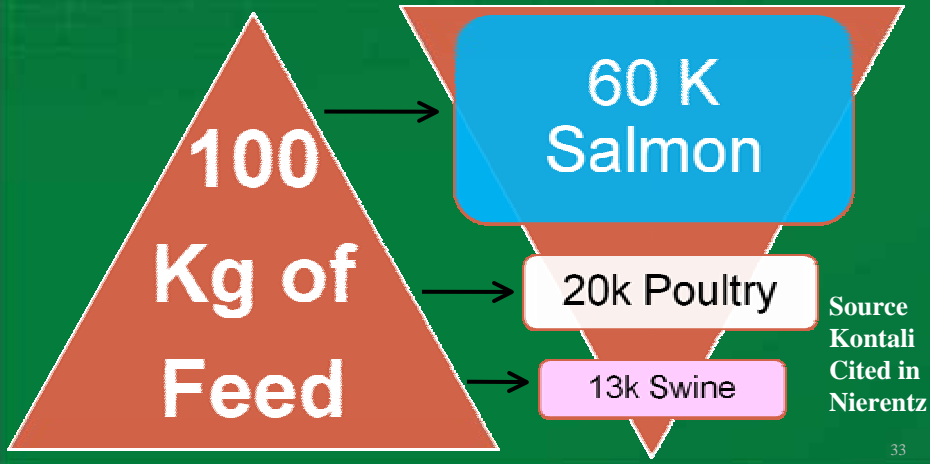
Knowledge from animal production





# Conversion Efficiency

Feed to Edible Meat



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## Aquabusiness Sources of Competitiveness



Extractive fishing  
is like agriculture  
10,000 B.C.  
Now 50% of fish  
is cultivated.  
In China 70%

Fish  
Low energy  
consumption.  
Float .  
Less skeleton  
Thermo regulation

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# Tilapia: The Aquachicken



Eats vegetal  
proteins, no fishmeal

Good

- Conversion
- Taste
- Color
- Oils Omega 3
- Proteins



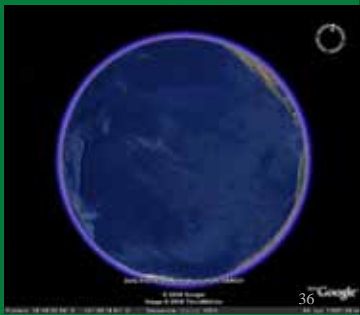
# The Sea



Foods, Fuel, Fs  
Sea Farms and  
Sea Highways  
Sea Grant Univ.  
Living Space

FRESH WATER

P  
A  
C  
I  
F  
I  
C  
  
S  
E  
A





# The Energy Portfolio

▣ **Dirty Fuels from Hell**  
Oil, Carbon



▣ **Clean Fuels from Heaven**  
Biofuels, Sun, Wind,  
Gravity, Hydrogen



▣ **“Sin” Tax t**  
**to Fuels from He**



Friedman

## Sciences Synergy



- ▣ Biotechnology
- ▣ Nanotechnology
- ▣ Information (IT)
- ▣ Strategic Management

$1+1+1+1 \gg 4$

N	M
O	A
	F L
R	O T
O	R H
O	U
M	S



## Firm vs Farm Approach

- ❑ No More Paternalism. Millennium Challenge Account Paradigm.
- ❑ Goldberg System Approach. Lead by big companies .
- ❑ Subsidiary provision of resources
- ❑ Farmer contribution will be land and labor paid at market value.

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## Countries Buying Countries

- ❑ FAO report danger of Neo Colonialism
- ❑ “Buyers” needing Land Europeans China South Korea, Arabs.
- ❑ “Sellers” :  
Madagascar case



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## III. Market Drivers

- ▣ Freer Agricultural Trade
- ▣ New Logistics Paradigms
- ▣ Contribution to the economy  
from the  
Basis of the Pyramid

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## Freer Agricultural Trade



- ▣ The Fall of Protectionism  
European Sugar, USA Textiles
- ▣ **Krugman:** Trade Conflicts are  
more National than International.
- ▣ Free Trade will not solve  
Povericum agricultural problems

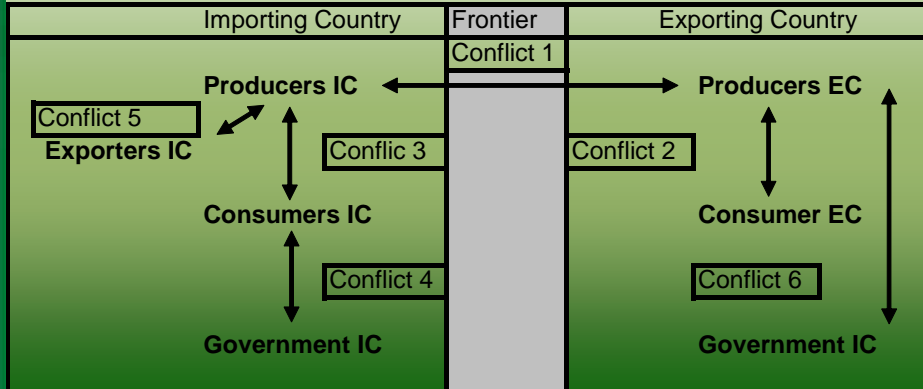
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# Internal Conflicts of International Trade (Krugman)

The Global Honduran

The International Trade Conflicts Map



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## New Logistics Paradigms

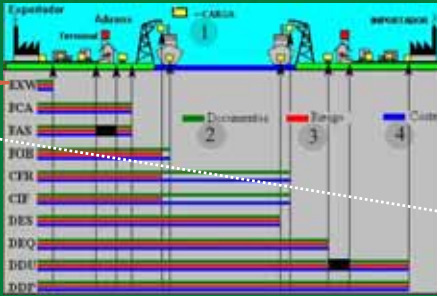
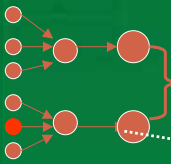
- ▣ Vessel: Big Importers Exporters
- ▣ Containers of fruits: B2B
- ▣ Pallets or Boxes, B2C
- ▣ **Full Logistics Service:**  
Consolidation of small shipments  
Economies of Scale and Scope

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# Traditional Trade Model

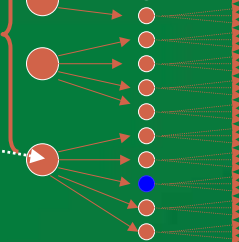
Production Traders



Distribution

Whole sale

Retail



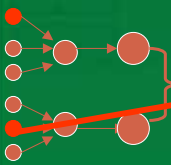
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## Economies of Scale



# NEW Trade Model: B2B B2C

Production

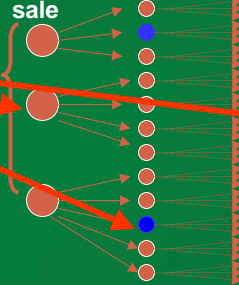


**Full  
Logistics  
Service  
Companies**

Distribution

Whole sale

Retail



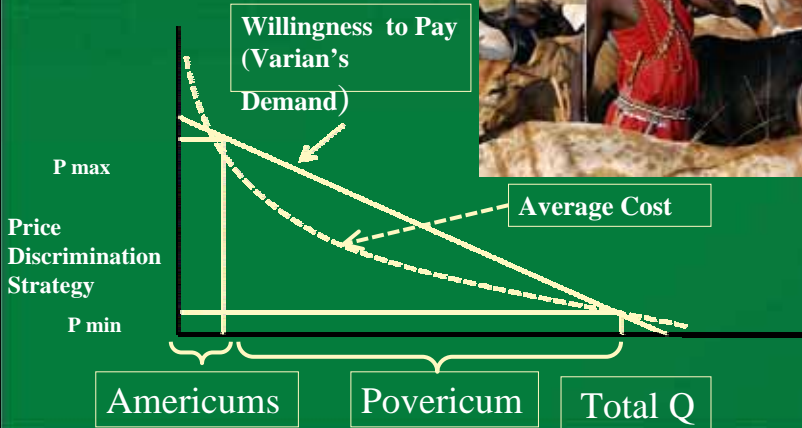
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## Export at LCL Level Economies of Scope

# Contribution to the Economy from the Basis of the Pyramid

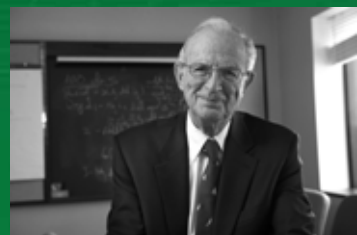


- Economies of Scale
- Price Discrimination



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## Agribusiness Education Implications



Goldberg, IAMA Founder : (In 1959...) “The word ‘business’ implied a managerial approach to it and, I think that we wanted people to understand that the farmer was a sophisticated part of our economy, not ... someone who wasn’t well educated, that didn’t worry about technology, that wasn’t up to date about the changes that were affecting his/her farm, but was very much a change-maker”. (Boland-Gallo).

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# Agribusiness Education

Less “farm”, more “firm”.

A bit less policy, more strategy

Wider Knowledge

More Human Virtues

Magnanimity

Solidarity

World Class



# THANK YOU

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