

# Near-Term Trajectories in Agri-Food: Implications for Business Strategy

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## Planned Path

Agriculture's productivity and structural shifts

Unintended consequences

Challenges and opportunities

## Agricultural Productivity Trends

U.S. agricultural growth has been driven by productivity and not by addition of inputs

Relative input use has remained virtually flat over the last 70 years

However, output from all of agriculture has been growing rather rapidly

- Output in 1956 was about 50% what it was in 1996
- However, by 2006, output was 112% what it was in 1996

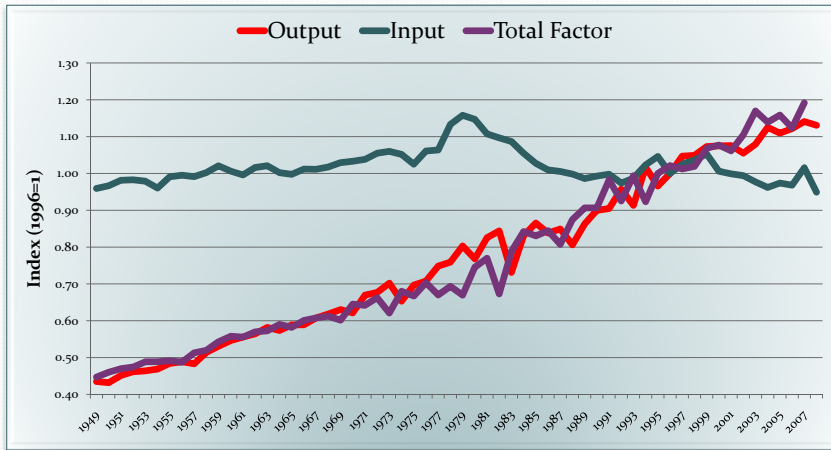
## Agricultural Productivity Trends

Total factor productivity (productivity improvement not related to production inputs) has been growing rapidly too

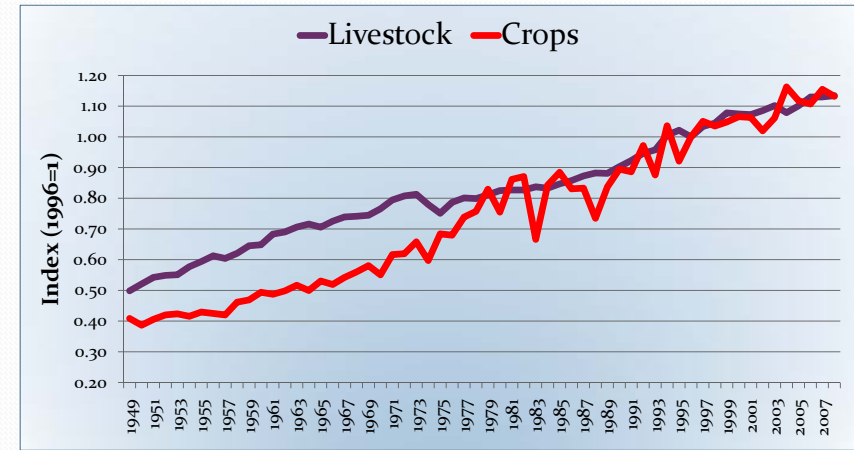
TFP = How intensely and efficiently inputs are used instead of how much of them are used

We have been milking more milk out of the cow drawing on technology and better production know-how

## Productivity in U.S. Agriculture



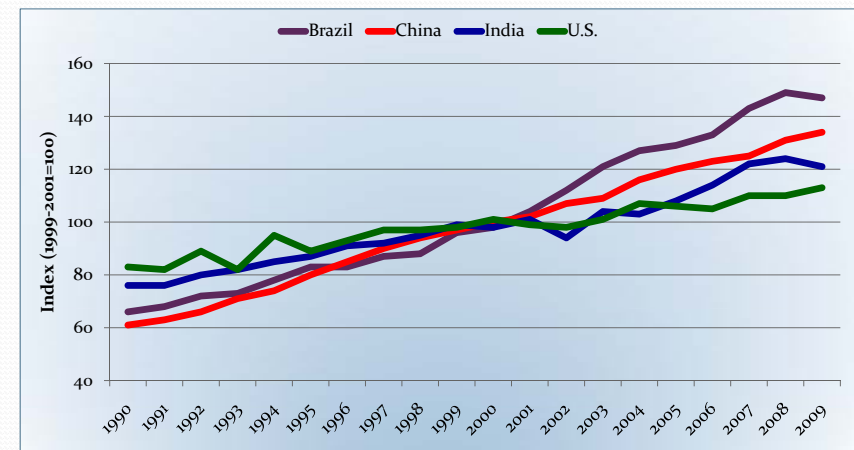
## Crop v. Livestock Productivity



## International Productivity Comparisons

- The U.S. is not the only country experiencing these rapid shifts
  - We have been doing it longer
- But China's agric productivity growth rate has surpassed that of the U.S. in relative terms
- As have Brazil's, and even India's

## All Agriculture Productivity Index



Source: FAOSTats.org

## Agricultural Productivity Trends

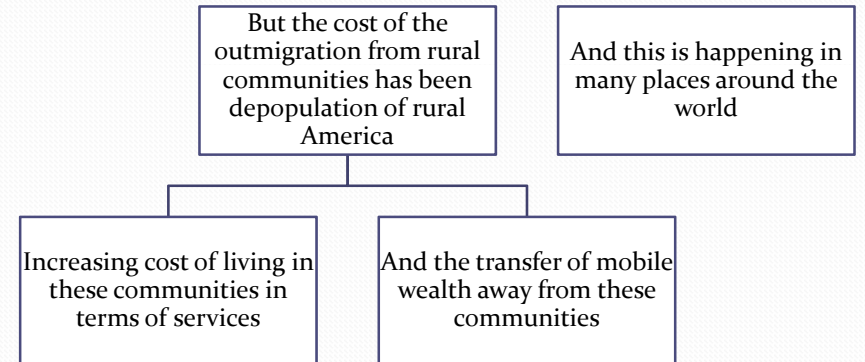
The result of this efficiency has been income growth

People move from agriculture into other industries

A phenomenon that has significant benefits for national economic growth and performance

As well as growth in national wealth and standards of living

## Agricultural Productivity Trends



## Agricultural Productivity Trends

Indeed, in 2010, 51.3% of the global population is living in urban areas

Our planet has been officially urban since 2007 when about 3 billion people were estimated to be living in urban areas

## Agriculture and Increasing Income

Increasing Incomes

Less cereal diet, more protein diet

More protein → More feed grains

## Agriculture and Increasing Income

Consider the case of China . . .

Per capita meat consumption in China was 20 kg in 1985

By 2000, it had increased to 50 kg  
• Compare U.S. (2000) = 51.56 kg

It is projected to reach 85 kg/person by 2030

And the population of China is growing at about 0.5% per annum

## Challenges and Opportunities

But it is not just about food

It is more about energy

- Transportation
- Electricity

China is projected to overtake the U.S. in oil consumption

And with uncertainty about supply, concerns begin to accentuate

## Challenges and Opportunities

What do these trends mean for global food supply and resource requirements?

How valid are the arguments about food v. fuel debates?

## Solutions

Let history guide us in our assessment of the near-future trajectories that face us

Agriculture has grown principally through technology and knowledge

And there is no reason to believe that will not continue

However, it is going to follow a different path

- Different from the monolith we have seen in the last seven decades
- And the emergence of multiple strategies to meet specific customer needs

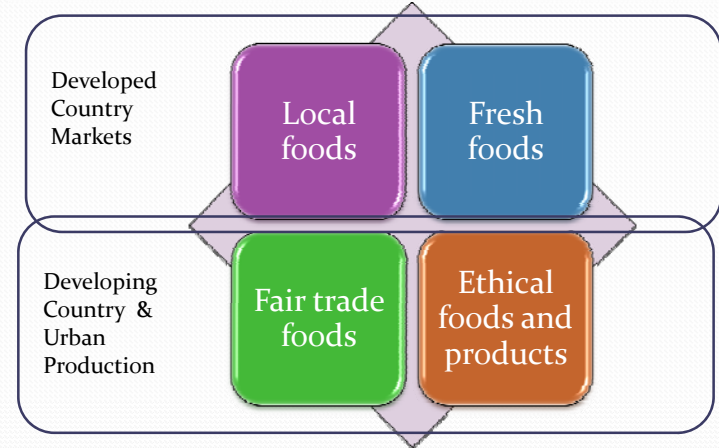
# The Principal Trajectories

Large scale operations

Small scale operations

Market Segmentation to Maximize Performance

# Small Scale Operations



# Small Scale Operations

Firms on this trajectory are going to be niche oriented

Addressing the idiosyncratic needs of their customers

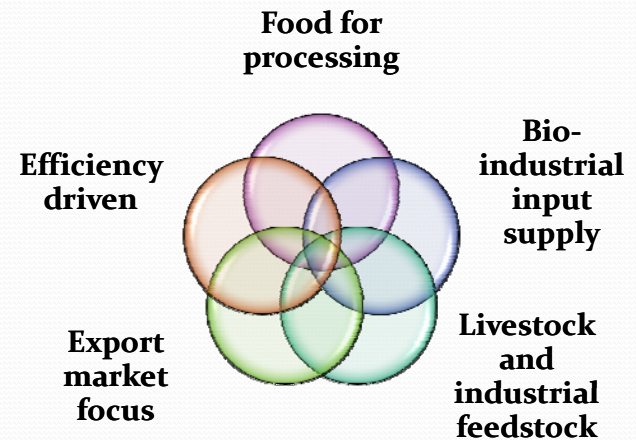
Because every successful niche is a commodity market in the making



They will be customer focused

But they cannot overlook efficiency

# Large Scale Operations



## Large Scale Operations

Efficiency driven

Cost focus

Innovation and technology

Think biotechnology (IV)

- From drought tolerance to drought resistance
- From production to consumer traits
- From commodities to ingredients

## The Risky Segment

Middle  
Producers

Too big to  
be small

Too small  
to be big

## Signals of Success

The players on each of these trajectories will need to develop keen business and economics perspective on their businesses

It cannot be a religion

Even though it should be a passionate pursuit

## Signals of Success

Strong industry relationships and close connection to markets will be critical for both

And enhancement in value perception

To facilitate reductions in transaction costs

## The Important Thing to Remember

Charles  
Dubois

- “The important thing is this: to be willing at any moment to sacrifice what we believe ourselves to be, for what we could become.”

# Thank You

Conversations