

# Future of Agri Food Processing in India



Dutch Manufacturers of Machinery for Food Processing and Packaging

Jan Hak, president



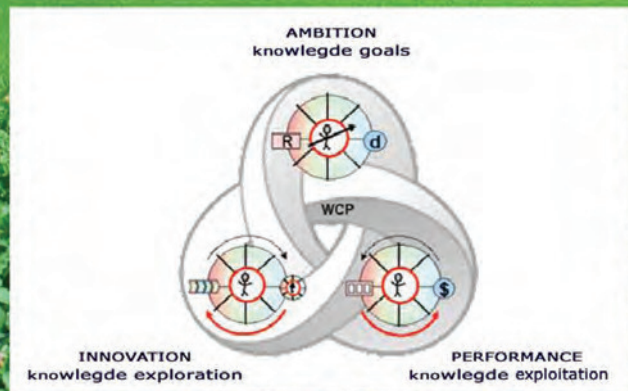
Farm to Fork, Delhi - India  
- 6 June 2011 -

Today is ...

- 25 years ago:  
1<sup>st</sup> Dutch Food( Potato) Technology Mission



## Agri Food Processing Capabilities in India



## Food Safety and security

- Quantity and Quality
- Nutrition value and medicinal functions
- Poverty elimination and crop rotation
- Energy security (alcohol)
- Natural disaster relief
- Legalization, monitoring & control



## Ambition

### Potatoes

Year	Ha (*1000)	Yield (Tons/ha)	Production (tons*1million)
1995	1136	16,9	19.19
2000	1222	18,4	22.48
2005	1319	17,9	23.61
2010	1420	19,5	27.69
2015	1530	20,5	31.36
2020	1640	21,5	35.26



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## Ambition

### Constrains

- Huge area, low yield.
- Breeding and extension of new varieties.
- Seeds supply systems.
- Lack of chain quality control and management.
- Logistics and supply chain management.
- Added value creation.



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## Ambition

### Strategic outlook

#### World

- Growing Population
- Food Shortages
- Water Shortages

#### Society

- Ageing population
- Growing high(er) income population
- A wealth of choice
- Change in lifestyle and dietary patterns have increased the incidence of chronic non-communicable diseases including:

- ✓ *Obesity*
- ✓ *Cardiovascular diseases*
- ✓ *Hypertension*
- ✓ *Diabetes mellitus*
- ✓ *Certain cancers*



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## Ambition

### Strategic outlook

#### The function of food is changing

- **WHAT** Calories → "experience" → nutrition & health, variety
- **WHEN** Regular → grazing and snacking
- **WHERE** In-home → out-of-home
- **WITH WHOM** Social → individual
- **HOW PREPARED** From scratch → ready-to-eat, heat and eat

#### A wealth of choice

- Primary production: year around, global supply
- Food industry: preserved, frozen, chilled, fresh
- Roles of retail and food service



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# Ambition

## Strategic outlook

### Shift of power to retailers and food service sectors:

- Closest to the consumer
- Multi-channel strategy
- Vital marketing information
- 70 - 80% Buying decisions at P.O.P.
- Co-marketing

### Supply management

- Continuous replenishment / flow through
- Changing logistics systems
- Cross docking, bar coding, consumer focused P.R.
- Business to Business, biggest opportunity
- Cutting out middle-man
  
- Market led approaches
- Food supply chain
- Intelligent automation



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# Ambition

## Mega trends in society

*According to 2011 - W. Lageweg*

### Needing social cohesion (and safety)

- Especially older generation.
- In more individualistic world.

### Increasing suspicion (decreasing authority)

- Especially young generation.
- Towards: institutions, banks, large corporations.



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# Ambition

## Mega trends in society

*According to 2011 - W. Lageweg*

### Needing "Roots and Wings" (and origin)

- Especially cultural "creatives", self determination.
- Regional identify, interest in origin and process.

### Stressing sustainability

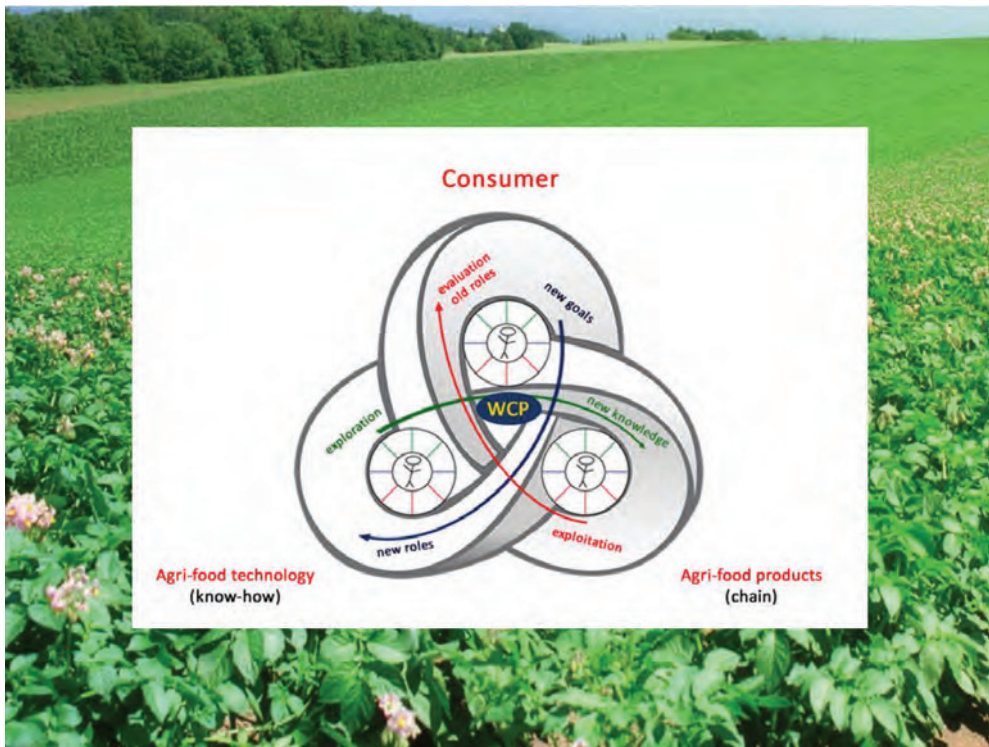
- Especially awareness of scarcity.

### Increasing transparency

- Especially sharing knowledge.
- Pressure on media, social media.



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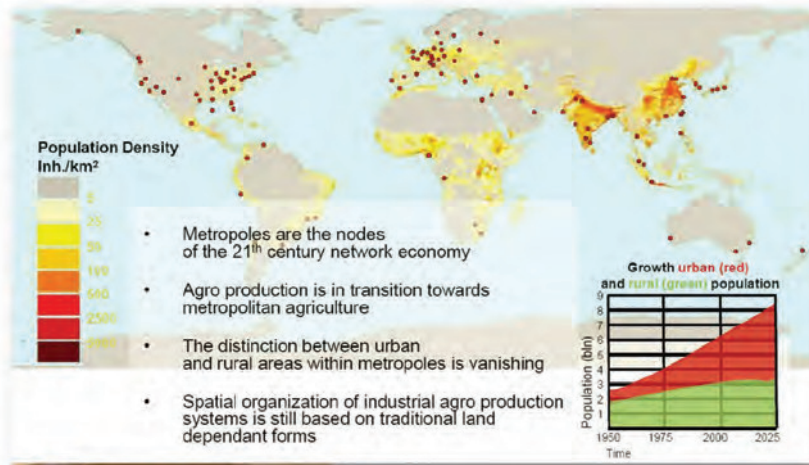


## Development Trend for Metropolitan Food Security



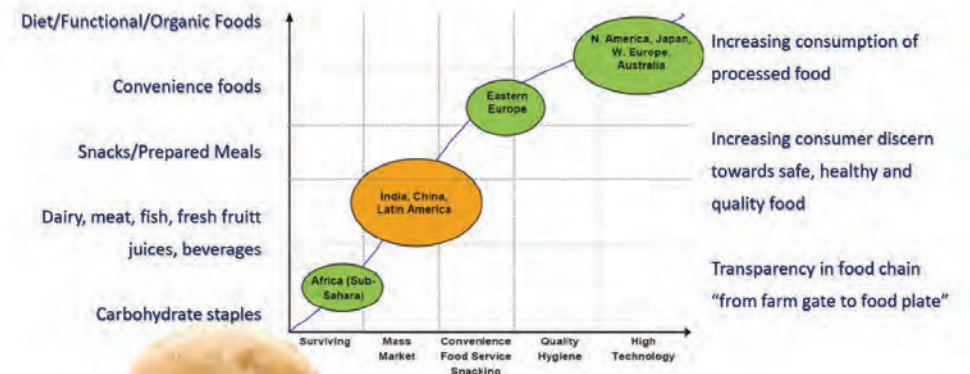
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## The world is urbanising



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## Urban people have more purchasing power: shift in consumption basket



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## Diversification of demand in Metropolises:

from food to fashion to pharmaceuticals



Energy and building  
Fuel, fibers

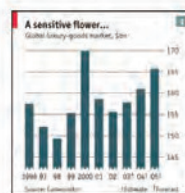


Food  
Fodder, food crops, vegetables, fruits

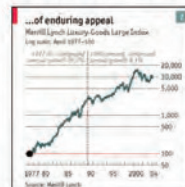


Fashion  
Flowers, flavors, fragrances

Pharmaceuticals  
Functional foods, pharmaceuticals



World spending on luxury goods in 2005: US\$ 165 bln

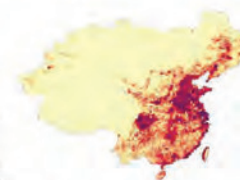
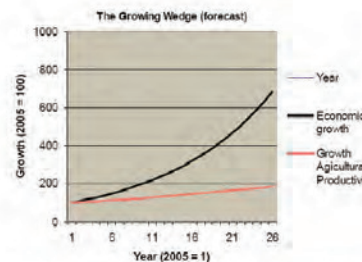


Which is a 100-fold increase between 1977 and 2005

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## The growing wedge:

China's agricultural growth lags behind on economic growth



Population density



Suitability for agricultural production

- 0 - 10
  - 10 - 20
  - 20 - 30
- Total area suitable for agricultural production: 11%

Jump in agricultural productivity is necessary to meet growing demand of middle class. Still, there will be growing import of agricultural products.



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## Conclusion

- Increase of demand for diverse, convenient and high quality (fresh) food
- Lack of fertile land and water (urbanized, desert)
- Environmental pressures
- Veterinary risks
- High-tech developments



Metropolitan Food Security Development



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## Vision

- ✓ World class showcases in sustainable development (efficiency of land, energy, water and material utilization)
- ✓ Driver for economic development through innovative food production
- ✓ Maximize synergies between rural and urban development
- ✓ Lead the way for India's long term food security



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# Innovation

## Short presentation

- **Seed Potatoes & vegetables**  
*Clean room technology - e.g. Broere*
- **Cultivating**  
*Drip irrigation, crop rotation in (semi) arid areas - e.g. Cloutwijken Estate, incl. Dacom*
- **Harvesting**  
*Low damage lifting - e.g. Ploeger, Broekema*  
*Low damage handling - e.g. Oldenhuis Prinsen*
- **Storage**  
*Optimal storage, conditioning - e.g. Mooij, Tolsma*
- **Processing**  
*Processing for starch - e.g. Nivoba*  
*Multi-purpose processing - e.g. Royal GMF, Kiremko*
- **Education, training**  
*World wide - e.g. Academi IO, Hak&Partners*
- **Management, investments**  
*World wide - e.g. Agriplan*



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# “Creating Better Food” – Strategies for Success



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Thank you !

For more information, please visit our website:

[www.gmv-fme.nl](http://www.gmv-fme.nl)



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