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# Addressing Grand Challenges thru Science

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Cargill, Incorporated

# Watermelons

- **Squared (cubed) design**
- **Customers in Japan**
- **Benefit:**
  - *Conserve space*
  - *Easier to handle*
  - *Higher value / sq m*
- **Thru science**



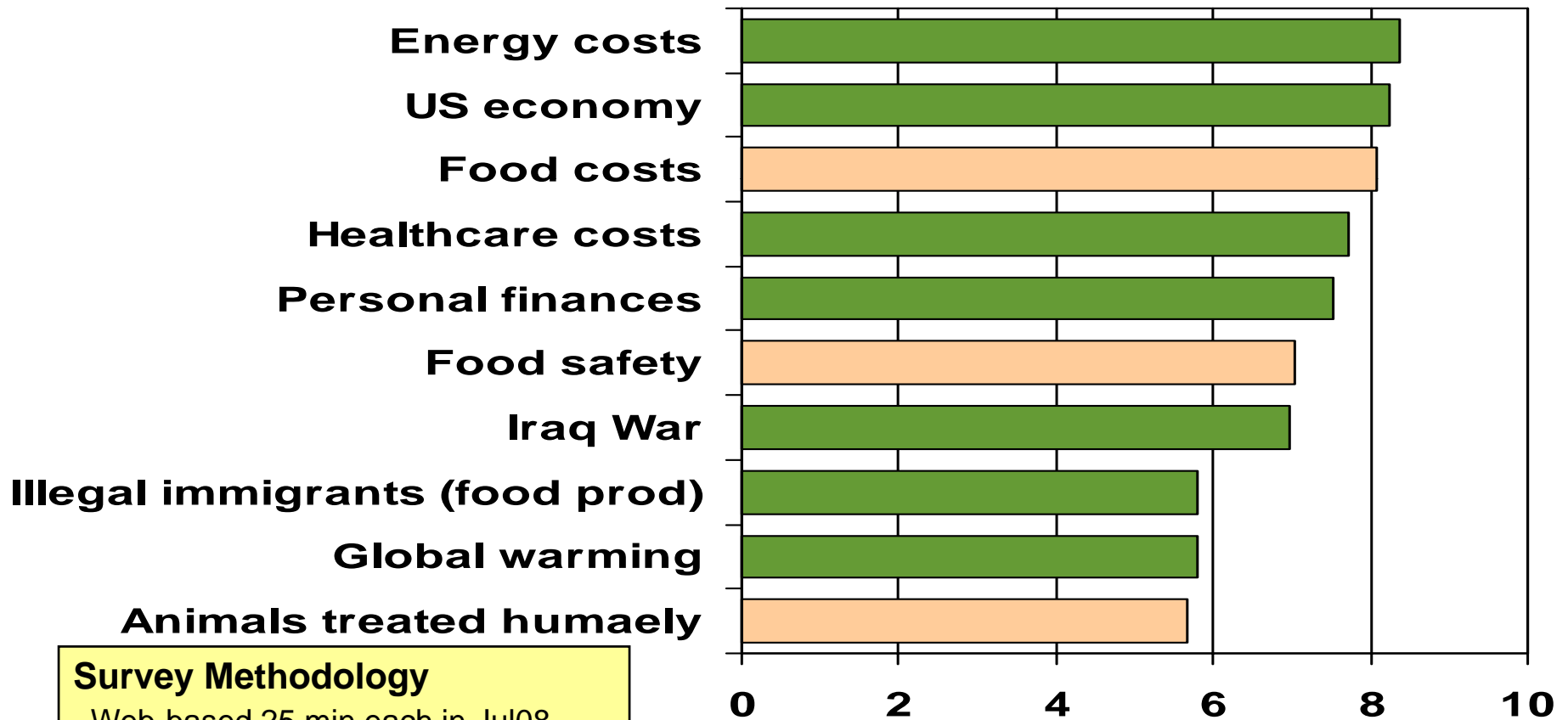
## Key messages



- **Grand challenge** .. to be customer focus (serve customers)
- **Food drivers** .. to be nourishing, affordable & social
- **Priority** .. to strengthen safety, efficiency & social (neighbor)

# Consumers .. what's important?

- Key issues are food costs & food safety
- Shared values are 5X more important than technical skills



## Survey Methodology

Web-based 25 min each in Jul08

2,066 completed surveys

54% female / 46% male

Profile average US grocery shopper

Source: Center for Food Integrity (2008), Survey Sampling Intl. (Jul08)

# Food Headlines

## 2009 Top Food Stories

1. **Peanut Butter** ... recall due to salmonella
2. **H1N1 virus** .. Mexico story continues to unfold



## 2008 Top Food Stories

1. **Melamine** ... ingredients to milk
2. **Tomatoes – no peppers** .. salmonella
3. **Raw milk** .. new fad centered on healthy
4. **Frozen uncooked entrees** .. salmonella
5. **Downer cows** .. california slaughter facility

Source: B Marler (2008)

# Consumer Drivers



- Drivers are good, clean & healthy
- Emerging health, social & taste drivers
- Focus on lifestyle & enjoyment

## • **Now culture ... real-time food info (grocery & restaurants)**

- Gen Y (14-27 yr old) .. individuality, enjoying life
- Gen X (28-43 yr old) .. balance career & family
- Aging baby boomer (44-62 yr old) .. sense of entitlement
- Preboomers (63+ yr old) .. duty, thrift, faith, tradition

## • **Focus on nutrition, convenience & social**

- nutrition .. 36% no claims, 20% 'low in', 23% 'high in'
- convenience .. time is a premium
- social cues ... local, free-range, & antibiotic-free

# Customer Drivers ... access, quality, cost

- Drivers are safety, efficiency & social
- Focus on land or food value



- **Inputs**

- land
- nutrients (ingredients or grains)
- animals / genetics
- capital
- facilities
- labor
- energy

- **Processes**

- operations / production
- regulatory
- expertise

- **Outputs**

- food
- co-products / by-products

# Grand Challenges .. What's relevant?



- **Relevant challenges**

- safest food (be the Volvo® of car industry)
- best neighbor (be the Mister Rogers for children's learning)
- healthiest food (be the Panera Bread® of fast food industry)
- best culinary choice (be the dark cooking chocolate for the chefs)
- caringest production (be the MySpace® of internet)

- **Consumer**

- Is the position relevant to target market?
- how do I know this to be true?
- Is the position compelling ... by what dimensions or measures?
- Is the position available to own and sustain?



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# Safest Position

## Safest Car ... Volvo® Innovations

- 1944 Safety cage (Volvo PV 444)
- 1957 2-point safety belt
- 1959 3-point safety belt
- 1964 Disc brakes front
- 1964 Rear-facing child seat
- 1966 Disc brakes front & back
- 1973 Side collision protection
- 1987 Airbag for driver
- 1998 Whiplash protection
- 2009 CitySafety (prevents crash)



## Safest Meat ... Pork Innovations

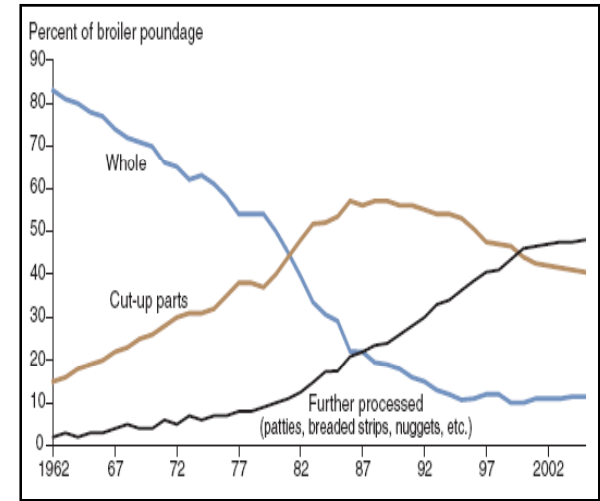
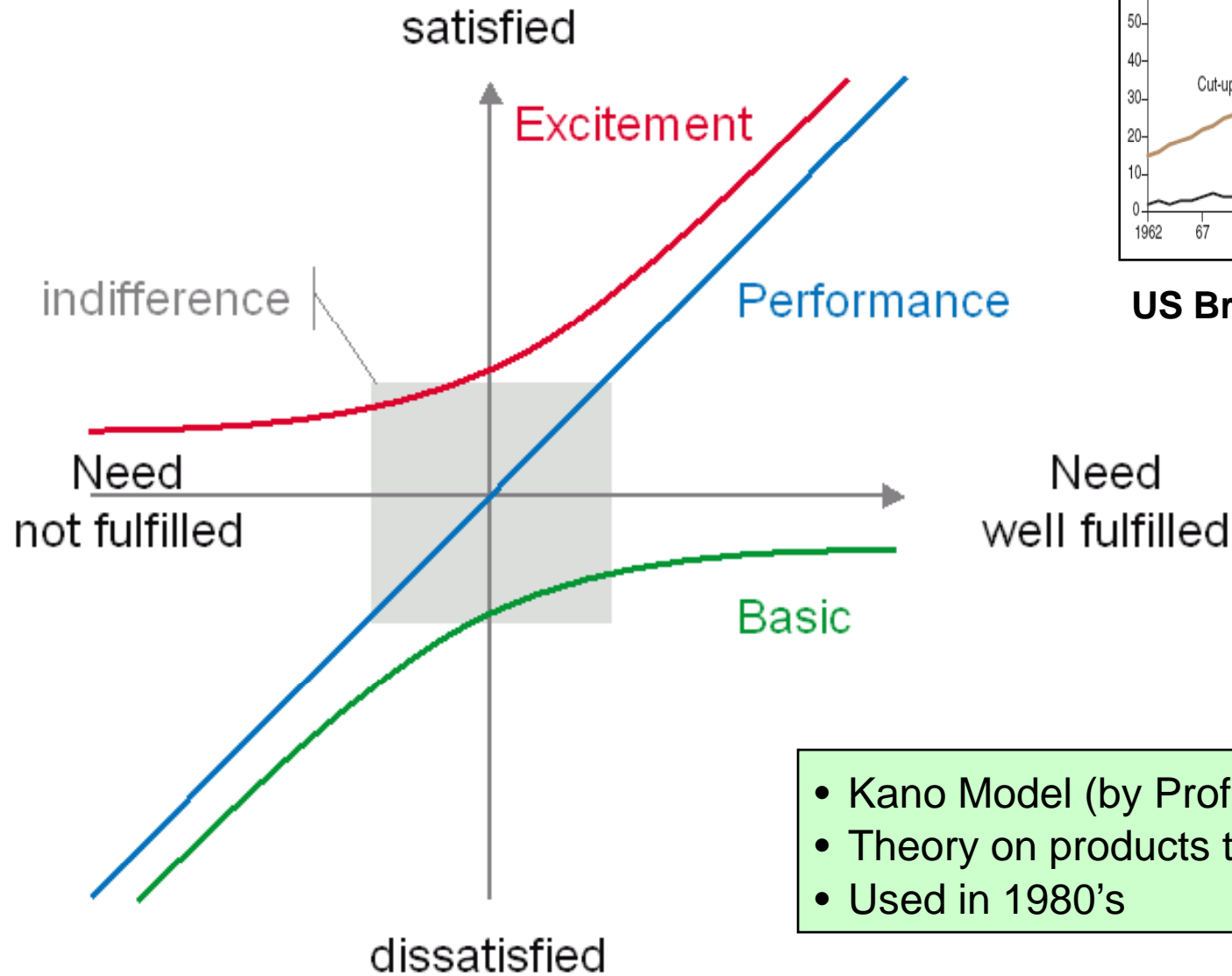
- 1958 GRAS in FD&C Act
- 1963 Food Irradiation Safe (FDA)
- 1973 HACCP (US FDA)
- 1989 Responsible Pork Production
- 2009 PQA Plus II

- Food borne illness cost \$ 6.9 bil
- Scan before serving



**Don't be blah.®**

# Product Development model



**US Broiler Industry Portfolio**  
(Martinez & Stewart ERS, 2003)

- Kano Model (by Prof Noriaki Kano)
- Theory on products to satisfy customers
- Used in 1980's

# Address the impossible today



## Affordable Food

What processes to achieve 0% mortality?

How to achieve 33 PSY?

How to achieve 2.0 F/G wean to 120 kg?

How to supply quality, low-cost nutrients?

How to optimize food & by-product value?

## Healthiest Food

How to be listed with healthiest foods?

How to be a staple in reducing cancer risk?

How can pork be noted as heart-healthy?

# Strategic Vision

- **Define ‘what does winning look like?’**
  - understand ... relevant, recognized, & size
  - create ... prototype, platform supports industry
  - communicate ... aligns to position & growth
- **Customer**
  - position in mind
  - financial value – cost or revenue
  - time advantages – less or convenience
  - mind dimensions – fear or confidence



Apple®



Apple



LG

Life's Good



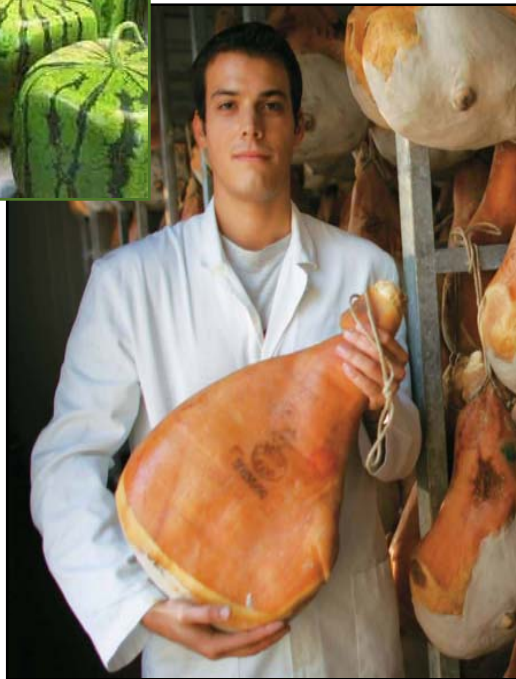
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An international provider of food, agricultural and risk management products and services

***collaborate > create > succeed***

## Imagine the day ...



### Begin with questions of ...

- what is the opportunity?
- what will customers experience?
- what is the value?
- can you own the position?



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