



**ICoMST 2009**

**Copenhagen, 16 - 21 August 2009**

# **European citizen and consumer attitudes and preferences regarding beef and pork**

**Wim Verbeke**

Ghent University

Department of Agricultural Economics, Belgium

wim.verbeke@UGent.be

# Contents

1. Background
  1. The image of meat
  2. Role of (labeling) information
  3. Importance of consumer segmentation
  4. Areas of change and Trends
2. EU FP6 beef and pork integrated projects
3. Project Scope, Materials & methods
  1. ProSafeBeef
  2. Q-PorkChains
4. Findings
5. Conclusions and future agenda

## 1.1. The image of meat

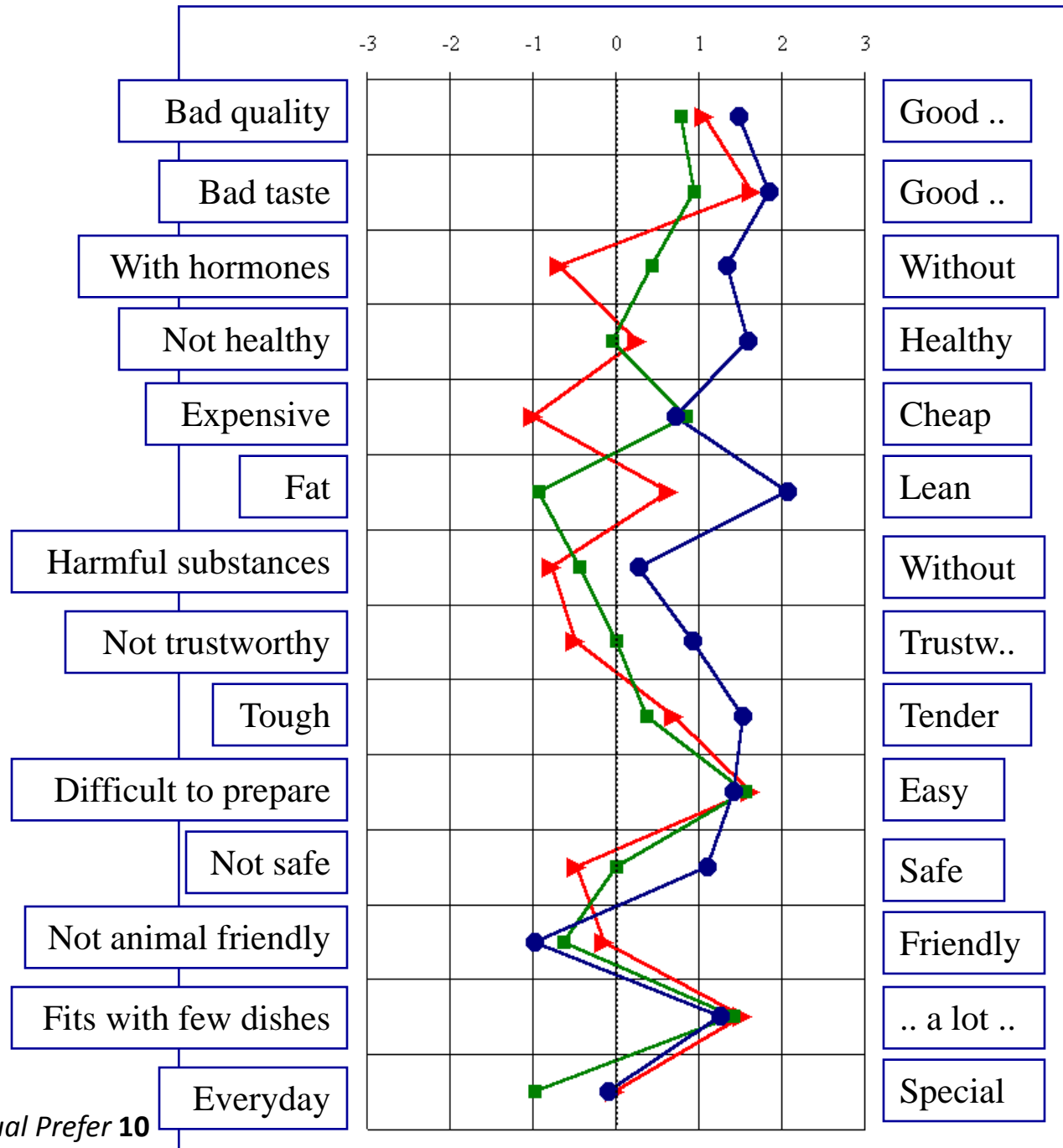
# Beef



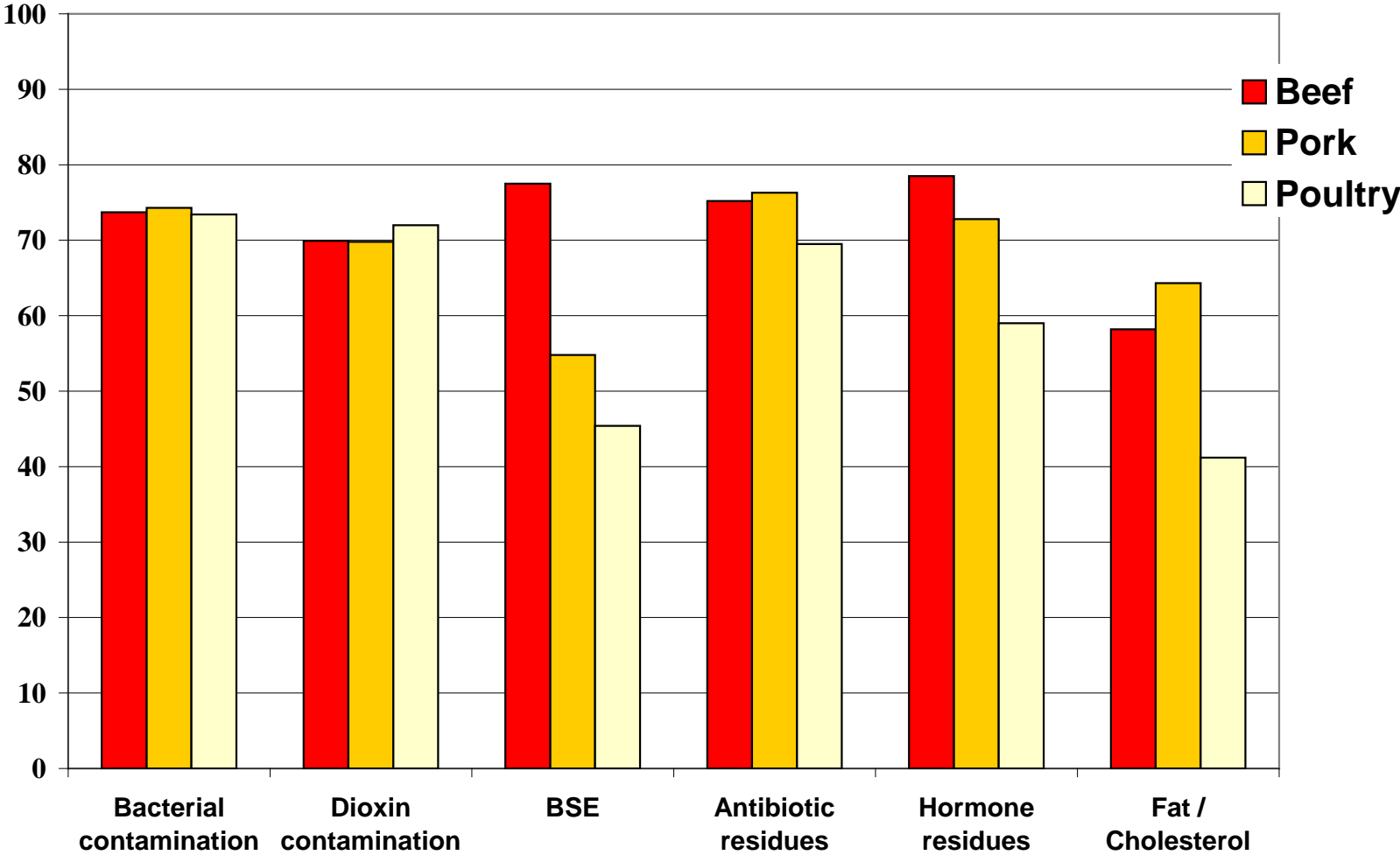
# Pork



# Poultry

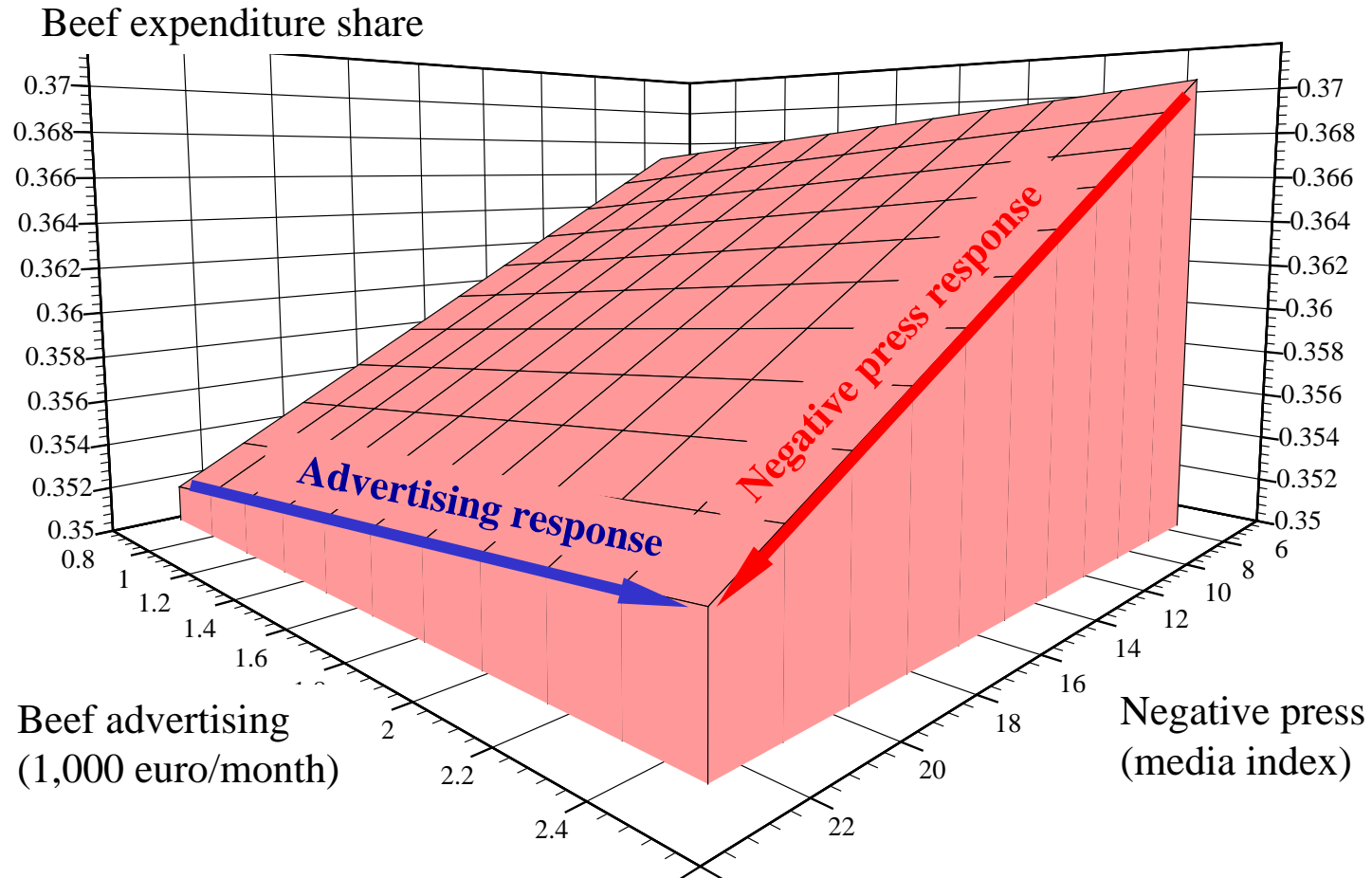


# % of consumers reporting concern or high concern about meat safety risks (n=540; 2004; Belgium)



## 1.2. Role of (labeling) information

# Power of negative press versus positive news (here: BSE versus generic advertising)

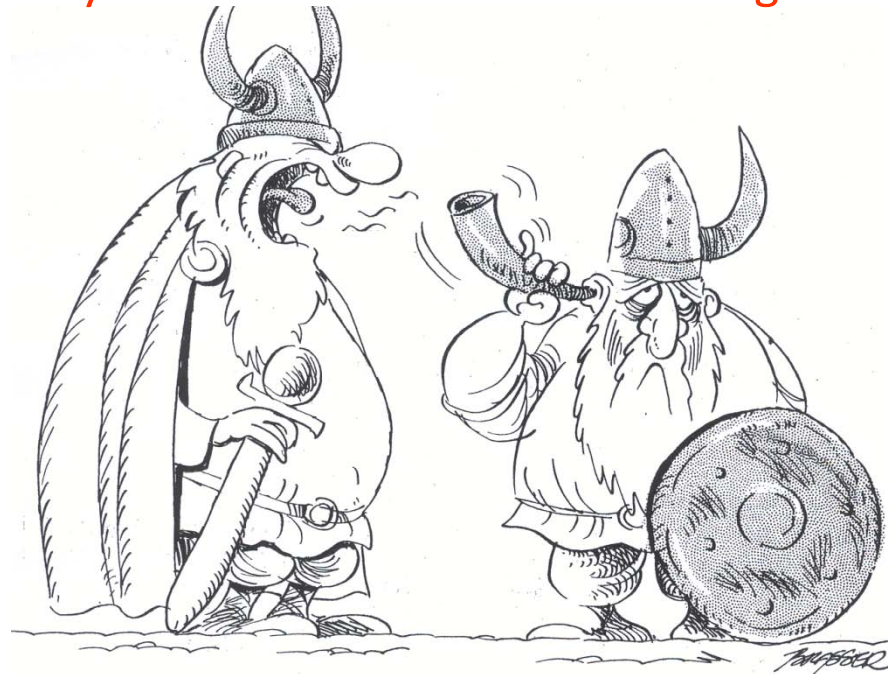


- Ratio of slopes = 5 to 1
- Five units of positive news needed to offset one unit neg press

Five  
Expensive  
Working slowly  
Shorter carry-over

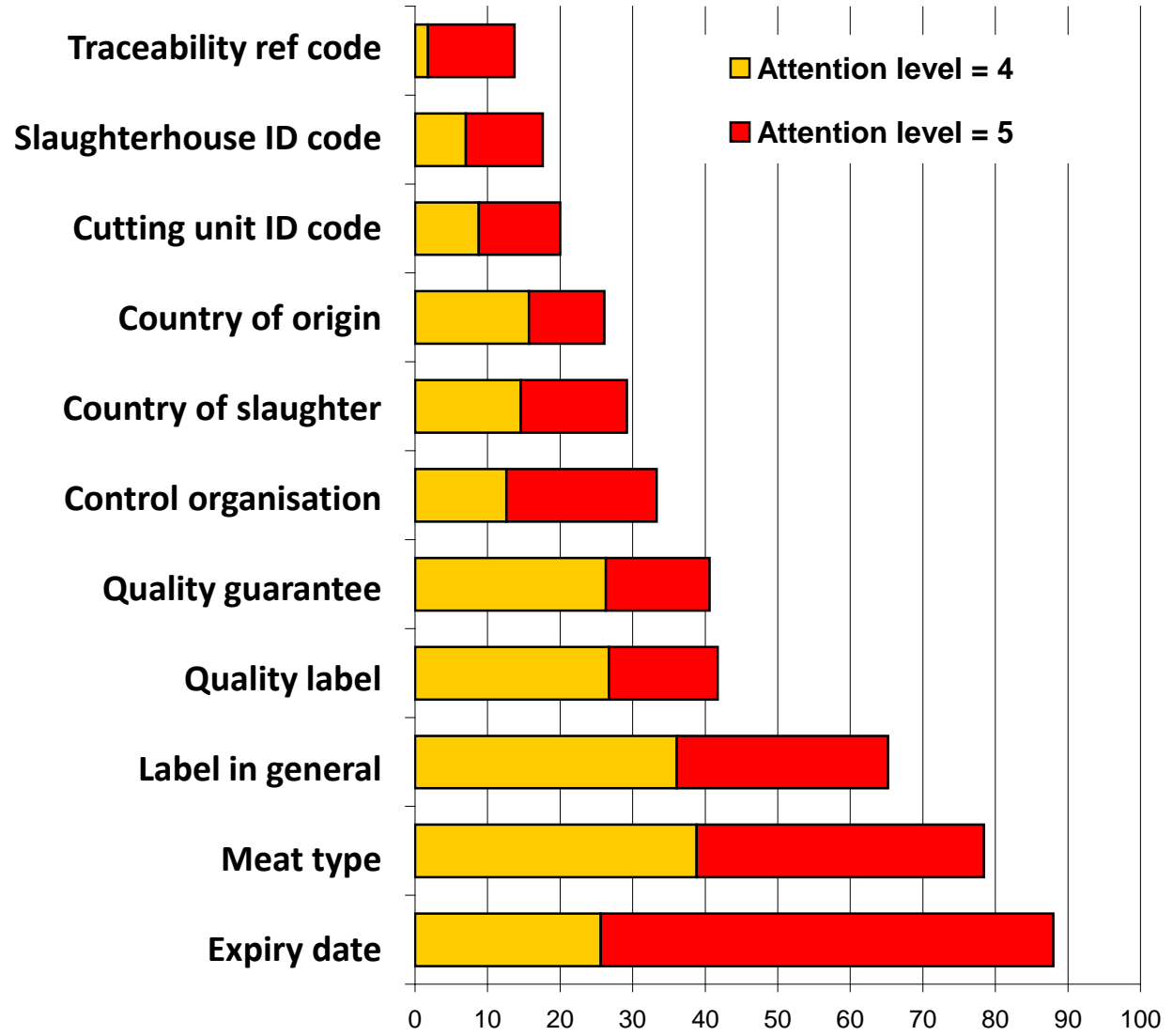
←→

One  
For free  
Working fast  
Longer carry-over





# Meat label = Information cue high density area



Probability of scores (4+5) for attention paid to information cues

## More information on food labels ?



- Information overload yielding uncertainty
- Best strategy for decision-making?
  - Ignore information
  - Systematic information processing
  - Use heuristics (easy decision rules; e.g. brand)
  - Avoid / Seek alternative

## 1.3. Importance of consumer segmentation

## Consumer segments based on involvement with fresh meat

	<b>Straightforward</b>	<b>Indifferent</b>	<b>Cautious</b>	<b>Concerned</b>
<b>Pleasure value</b>	High	Low	High	Medium
<b>Risk importance</b>	Low	Medium	High	High
<b>Socio-demo</b>	Male	Young	With children	With children
<b>Size</b>	17%	15%	36%	32%
<b>Focus</b>	<b>Taste</b>	<b>Price</b>	<b>Health</b>	<b>Safety</b>
<b>Information challenge</b>	Low interest in information; unless on differentiated sensory attributes	Low interest in information; unless price information	Trust in labeling and traceability; confidence in info source	Belief in mass media; need for personal reassurance

## 1.4. Areas of change - Trends in meat consumption

Grunert (2006) *Meat Sci* **74**

Verbeke et al. (2009) *Meat Sci* **83**

- Extrinsic quality (information) cues
  - Shopping less fast and less easy by some, occasionally
  - Convenience and meat avoidance
  - Concern for environment and animal welfare as citizen, less as consumer
- Safety less dominant
  - Health gains share
  - Eating quality and satisfaction
  - Novel processing; acceptance?
  - Environment, ethics, welfare
  - Citizen – Consumer duality

## EC 6<sup>th</sup> Framework Programme

### 4th Thematic Call - Thematic Priority 5: Food Quality and Safety (July 2005)

- T5.4.1.1 Improving the quality of pork and pork products for the consumer (Integrated Project)



[www.q-porkchains.org](http://www.q-porkchains.org)

- T5.4.1.2 Improving the safety of beef and beef products for the consumer in production and processing (Integrated Project)



[www.prosafebeef.eu](http://www.prosafebeef.eu)

# 3. Scope, material and methods

## Advancing Beef Safety and Quality Through Research and Innovation



FOOD-CT-2006-36241

[www.prosafebeef.eu](http://www.prosafebeef.eu)

This project is funded by the European Commission  
under the Sixth Framework Programme





# ProSafeBeef Pillar 5 – Consumer issues

## Consumers' need for beef safety and health information and acceptability of novel processed beef products

Resurgent beef safety crises:

- Low consumer confidence
- Low beef consumption levels

 *Effective provision information ?*  
*Consumer acceptance of new beef products ?*

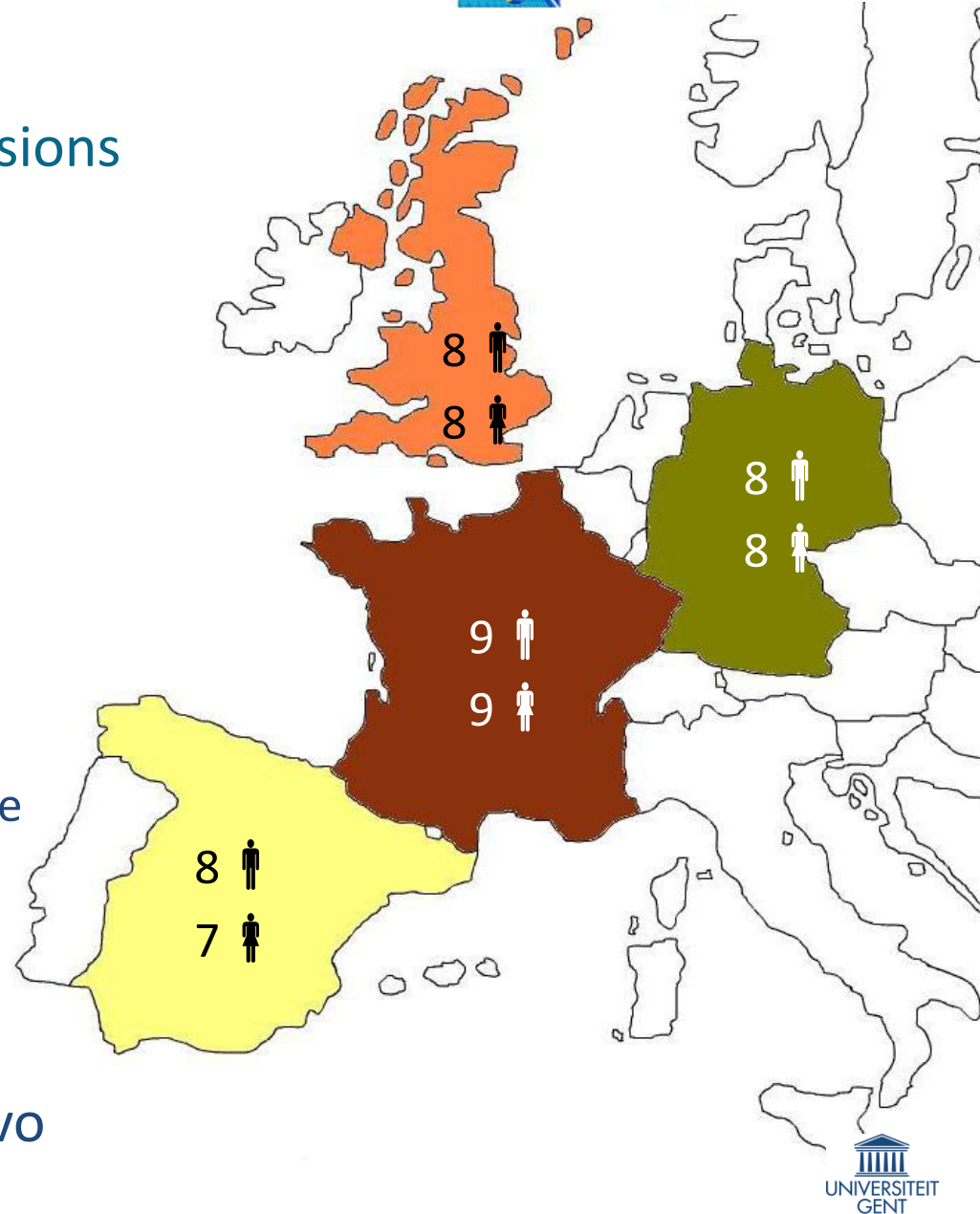
Objective:

Investigate consumer perceptions, attitudes and expectations on:

- Beef safety and healthiness
- Novel beef processing methods and novel beef products

## ProSafeBeef: Exploratory focus group discussions

- 8 focus group discussions
- 4 EU countries
- 65 beef consumers in total
- May 2008
  - Beef safety
  - Beef healthiness
  - Beef eating quality guarantee
  - Novel beef processing
  - Cloning / GM
- Full text transcripts
- Content analysis using NVivo





[www.q-porkchains.org](http://www.q-porkchains.org)

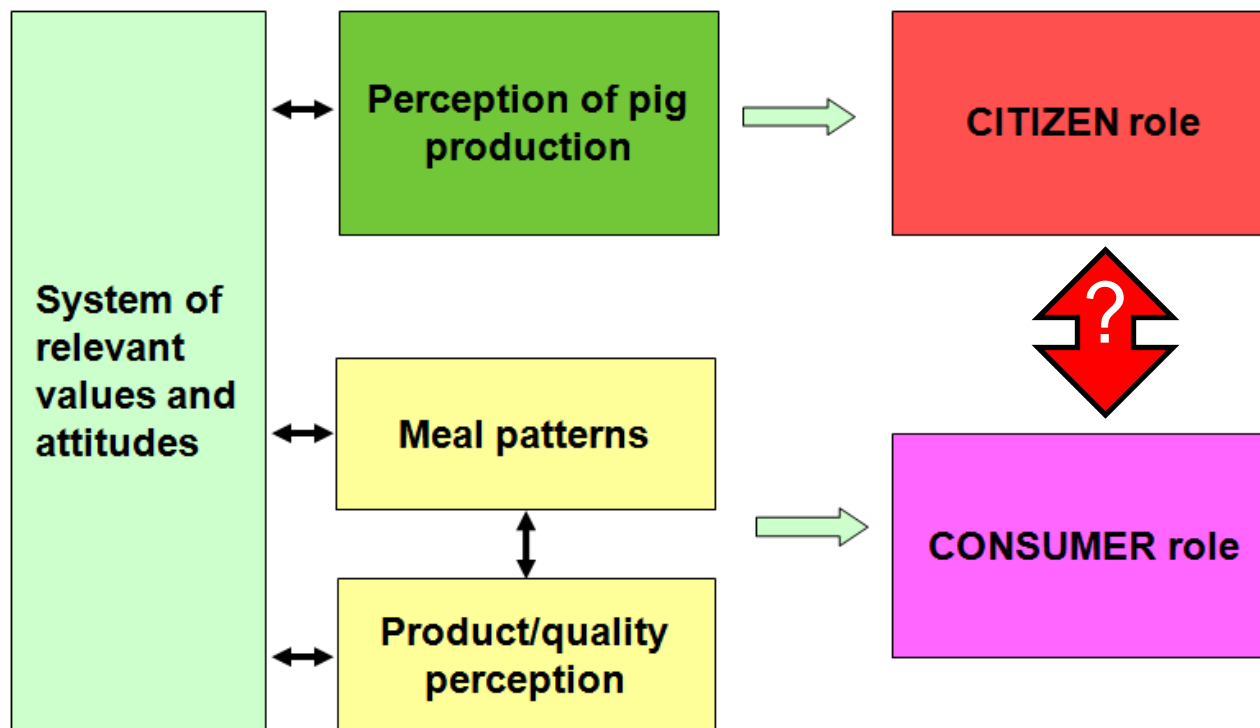
Ensuring quality of meat for the future



# Q-PorkChains Module I – Consumer/Market analysis

WP  
I.1

Pan-European segmentation associated with attitudes and behaviour related to pig production and consumption of pork products (month 1–24)



## Q-PorkChains: Quantitative cross-sectional survey

- Representative samples of  $n = 480$  individuals in
- 5 EU countries: Belgium, Denmark, Germany, Greece, Poland
- 2 INCO countries: Brazil and China
- Total EU sample size  $n = 2,437$
- First Quarter 2008
  - Pork consumption
  - Citizen attitudes
  - Socio-demographics and anthropometrics
- Data analysis using SPSS

## 4. Findings

- Exploratory insights from ProSafeBeef
- Quantitative conclusive findings from Q-PorkChains

# Advancing Beef Safety and Quality Through Research and Innovation



FOOD-CT-2006-36241

[www.prosafebeef.eu](http://www.prosafebeef.eu)

This project is funded by the European Commission  
under the Sixth Framework Programme



# Cues considered as signalling (un)safe beef



<b>Cues signalling safe beef</b>	<b>Cues signalling unsafe beef</b>
Labelled beef	Related to scandals
Branded beef	Unhygienic conditions
Own country or PDO/PGI beef	Beef from foreign countries
Organic beef	Offals
Quality guaranteed beef	Minced meat
'Natural' beef	Expired beef
Available beef	Packaged beef
Good appearance	Glass-bottled beef
Frozen beef	Restructured beef products
Fresh beef	Cheap beef
Butcher / Supermarket / "Kebab"	



## Beef healthiness

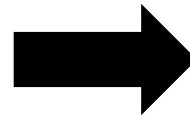
### *Perceived **positive** health issues*

#### Perceived assets of beef

High nutritional value

Lean meat

Necessity for human body



#### Related perceived health benefits

Strength and energy

Growth

Human development

## Beef healthiness

### *Perceived **negative** health issues*

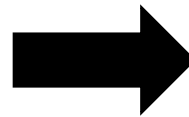
#### Uncertainties related to beef

Variable type of beef  
(product)

How much to consume?

Preparation method

Presence of harmful  
residues



#### Related perceived health risks

Cancer

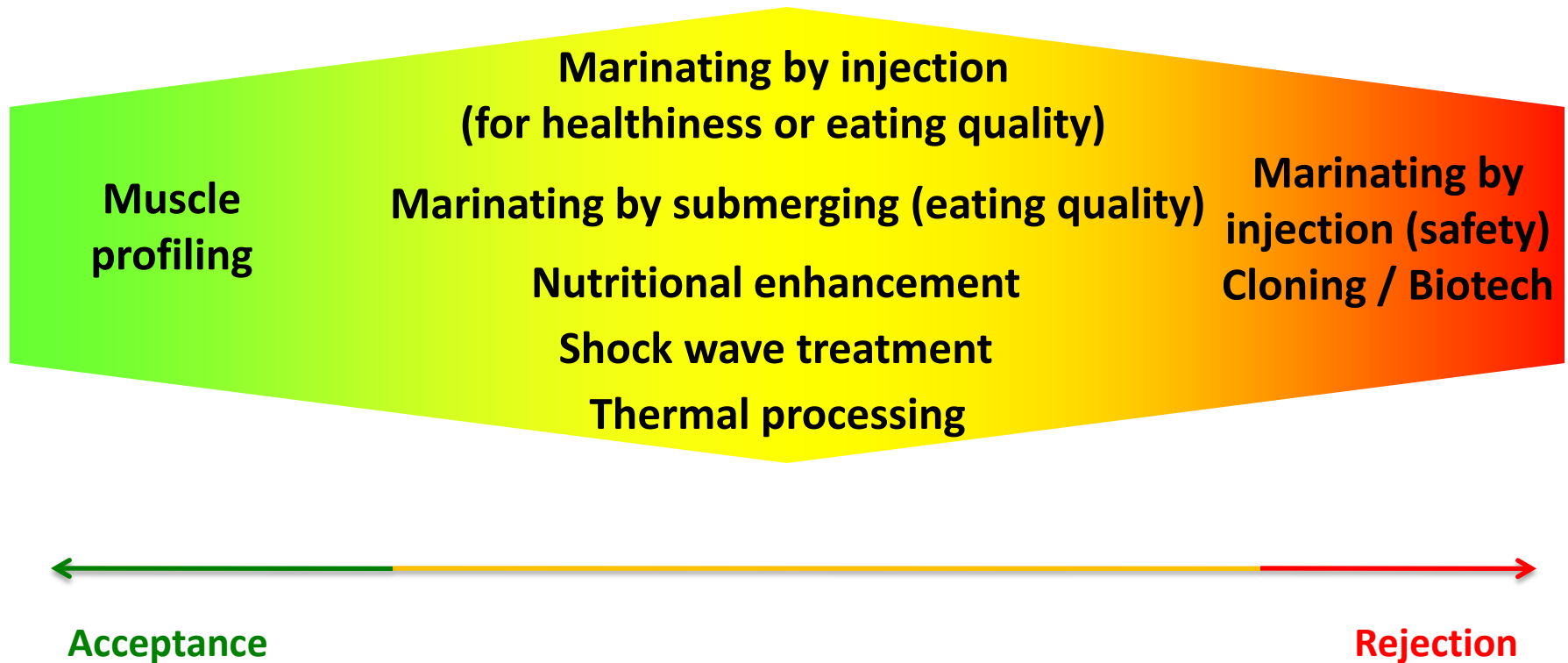
Cardiovascular diseases

BSE - CJD

Obesity

Lower life expectancy

# Acceptance of beef technologies



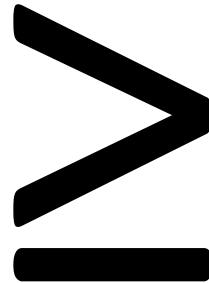
## Beef eating guarantee quality

### *Perceived advantages*

Guaranteed quality

Facilitating consumer  
choice

Appeal align to specific  
consumer segments



### *Perceived disadvantages*

Lowest qualities also  
marketed

Role of cooking practices

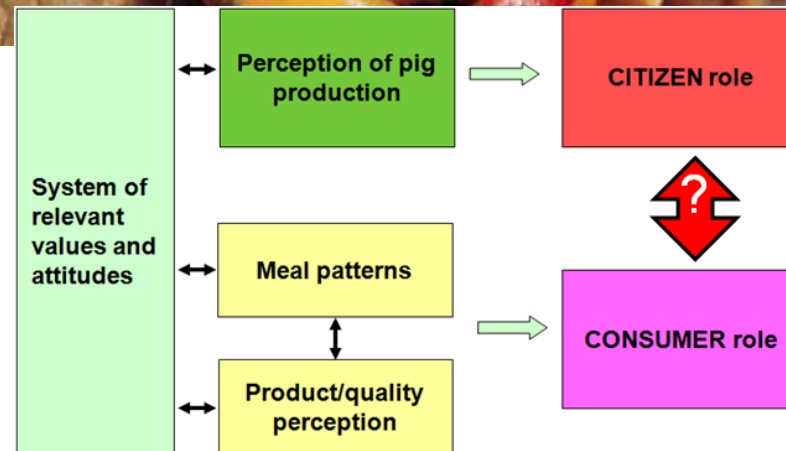
Costly to implement - Price

Overload of information

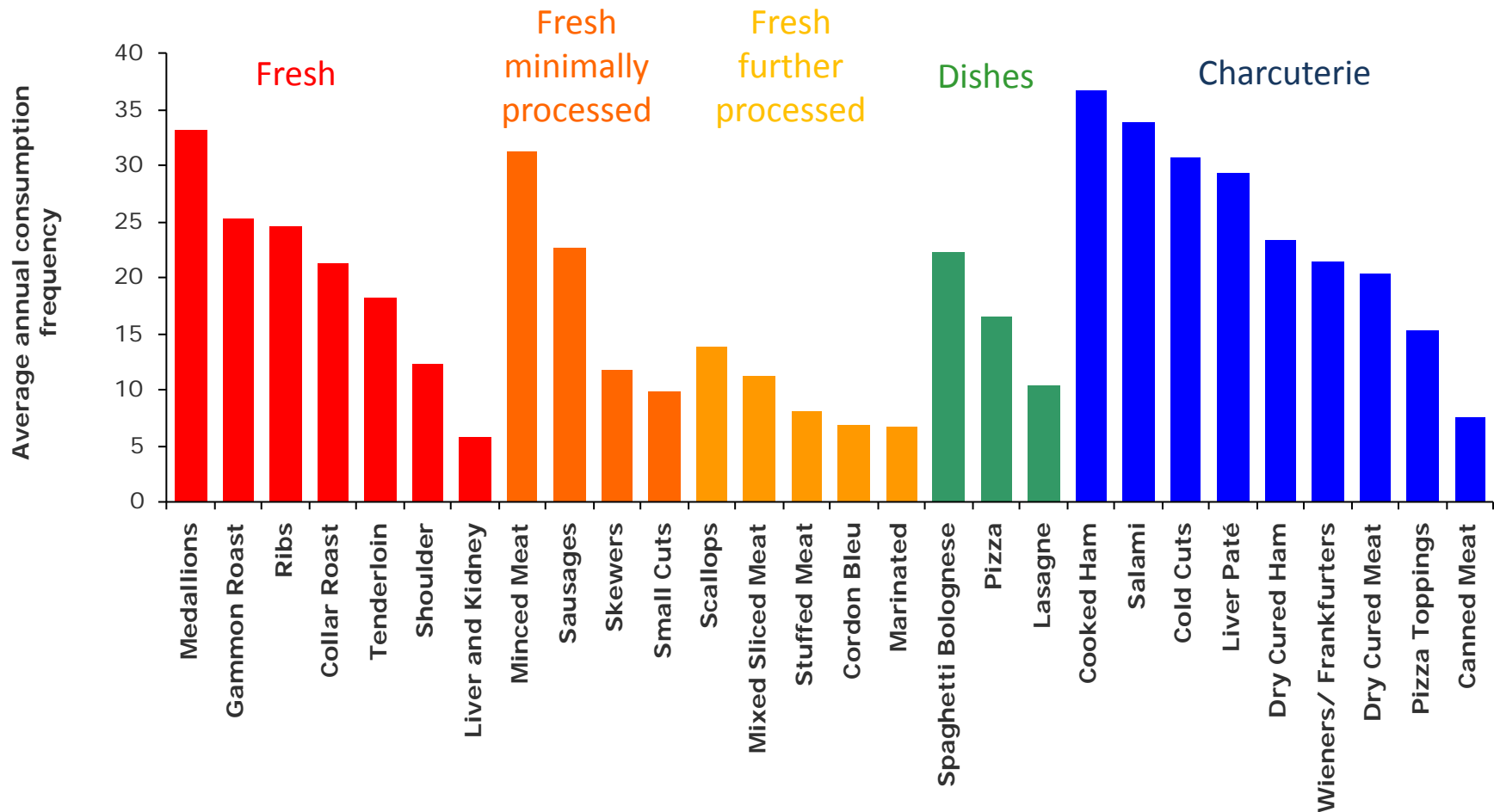


[www.q-porkchains.org](http://www.q-porkchains.org)

Ensuring quality of meat for the future

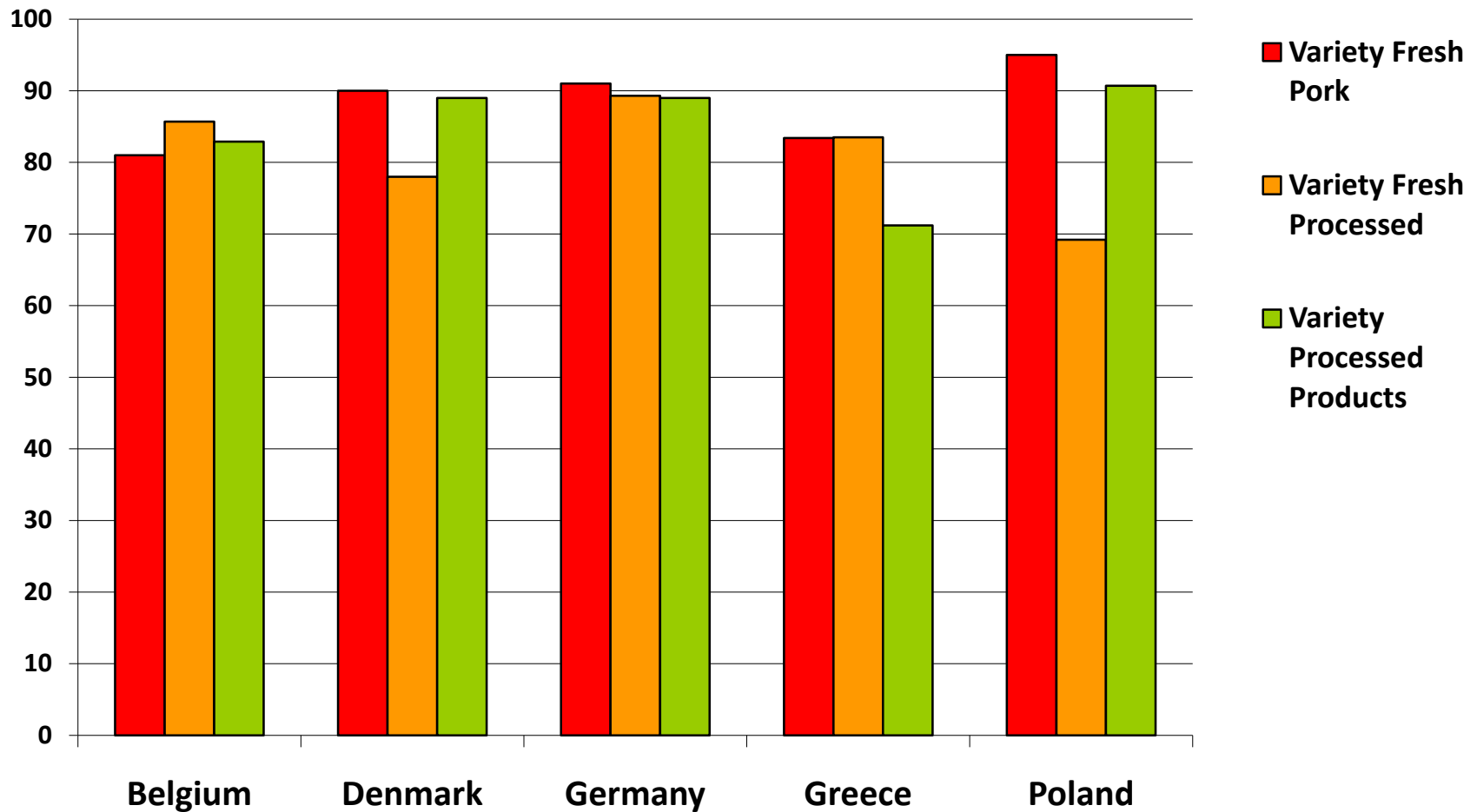


# Pork and pork products' consumption FREQUENCY



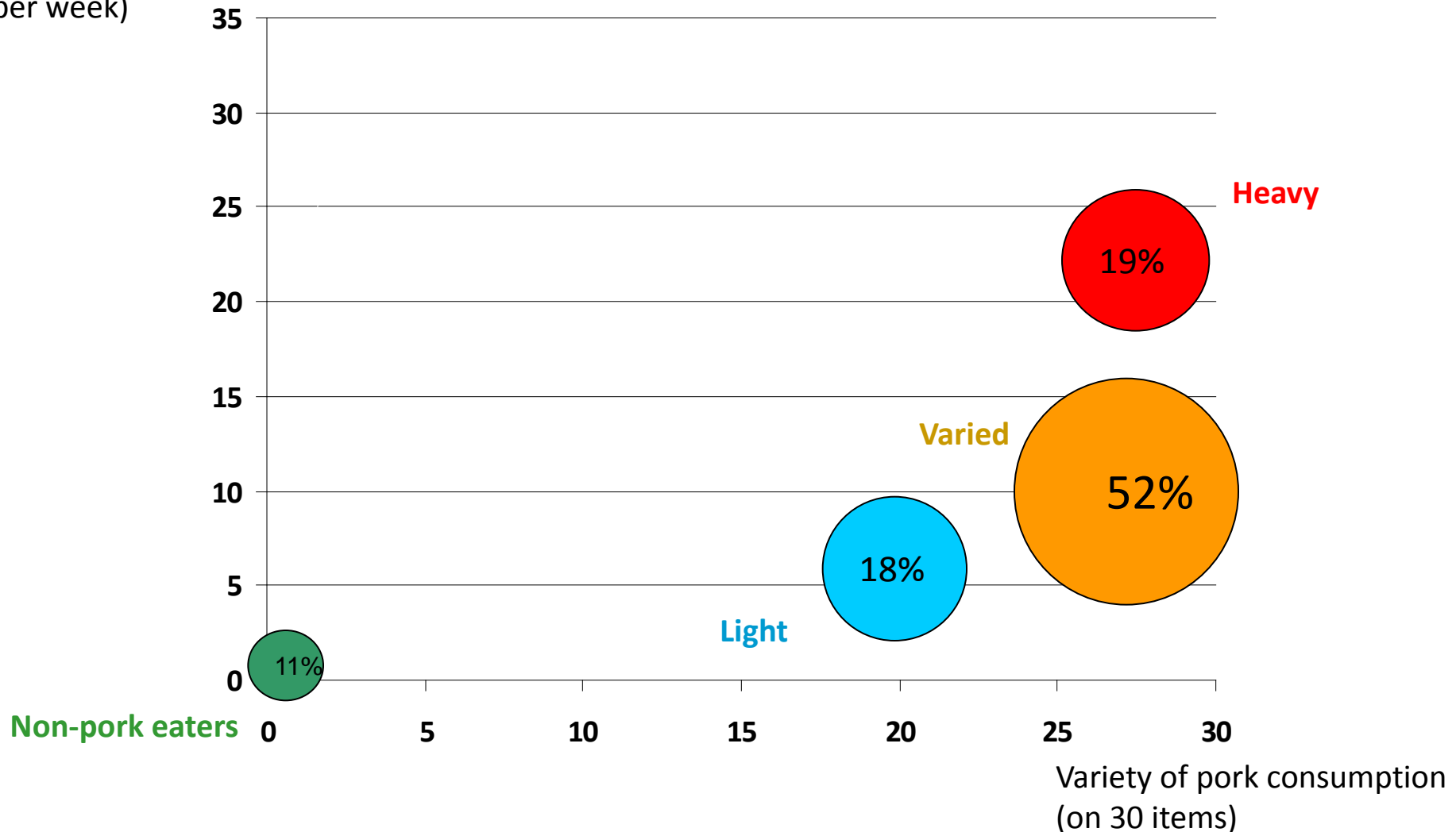
# Pork and pork products' consumption

## VARIETY



# Frequency by Variety Segmentation

Frequency of pork consumption  
(per week)

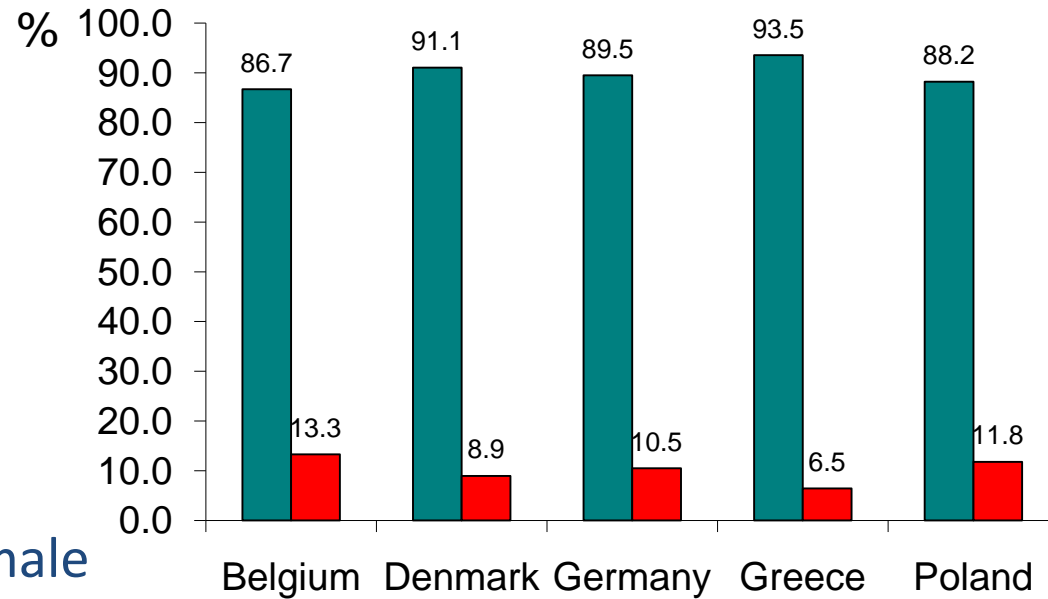




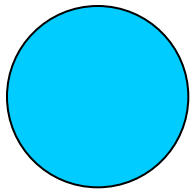
## Pork eaters versus non-pork eaters

### Non-pork eaters' profile:

- **Socio-demographics**
  - Twice more likely to be female
  - 2.6 times more likely to single
- **Nutritional status**
  - 32% less likely to be overweight ( $25 < \text{BMI} < 30$ )
  - 47 % less likely to be obese ( $\text{BMI} \geq 30 \text{kg/m}^2$ )
- **Less likely to attach importance to:**
  - Organic food by 1.38 times
  - Product information by 1.35 times

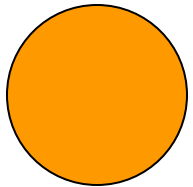


## Frequency and variety of pork and pork product usage Segments' profiles



- Light users

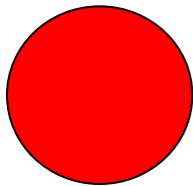
- More females, higher education, lower BMI, more singles
- Less interested in food, less innovative in their eating and cooking, less stimulation-oriented



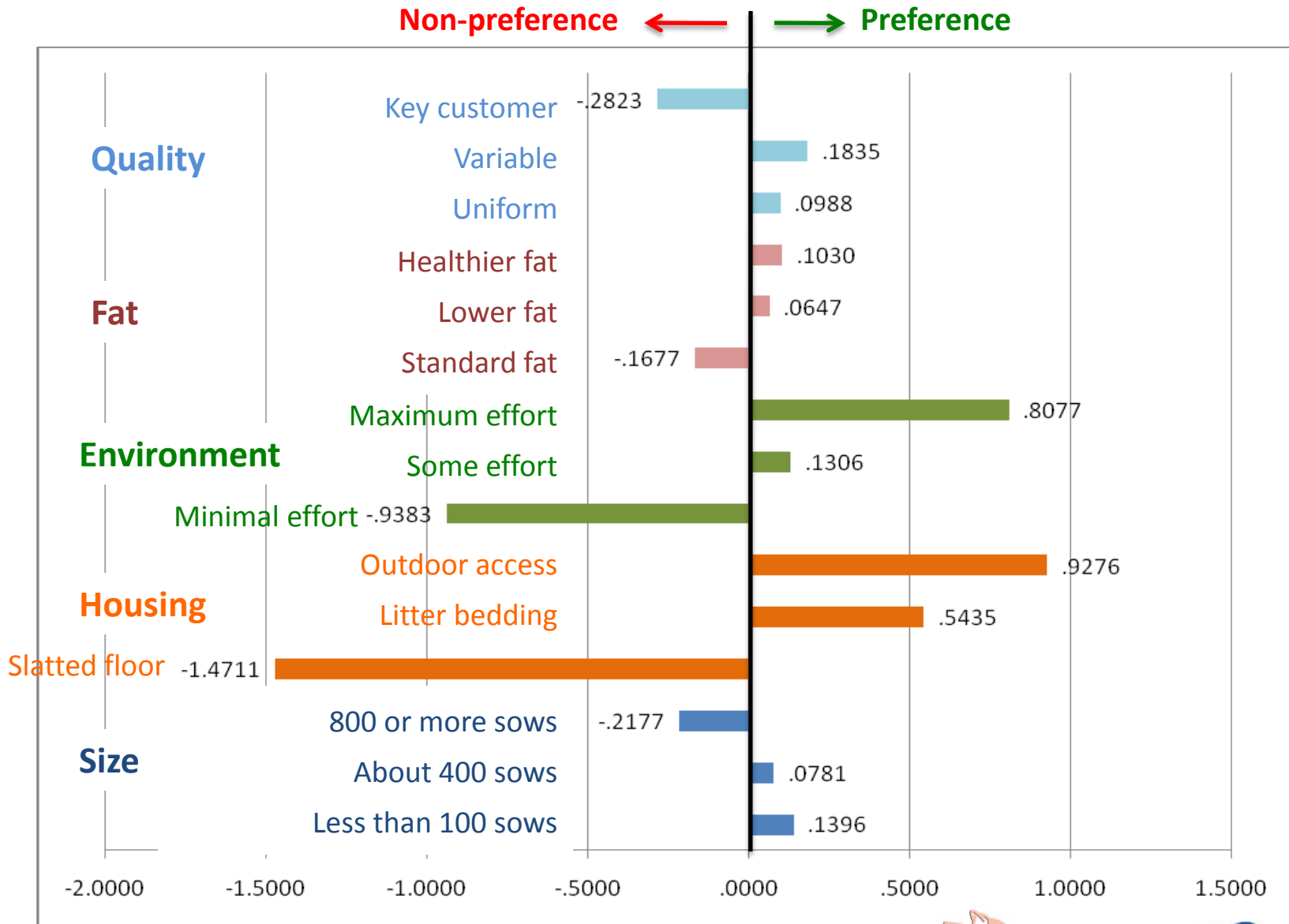
- Varied eaters

- Heavy users

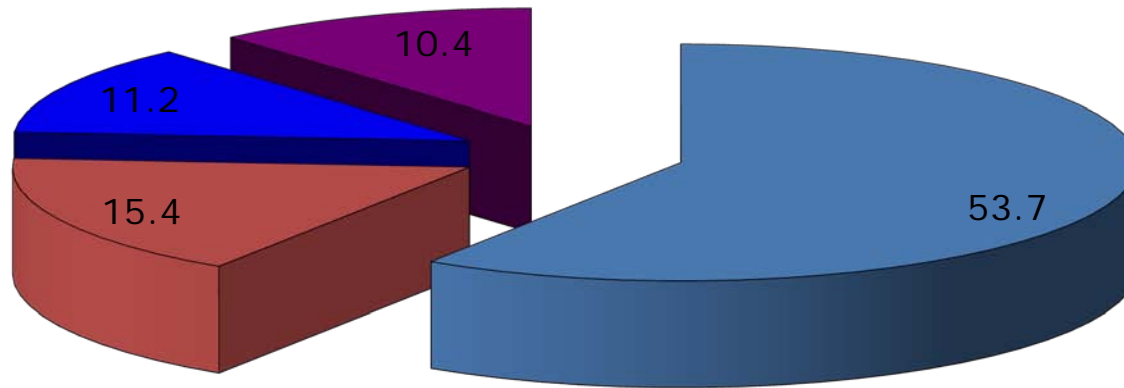
- More males, lower education, higher BMI
- Food very important, both innovative and convenience-oriented, like snacking, stimulation-oriented



# Factors affecting European citizen attitudes to pig production

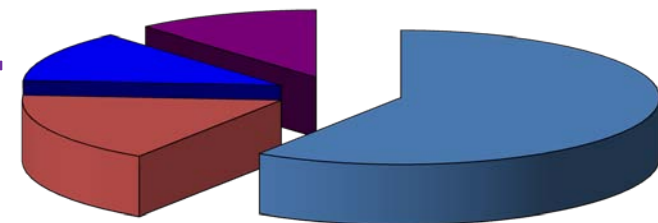
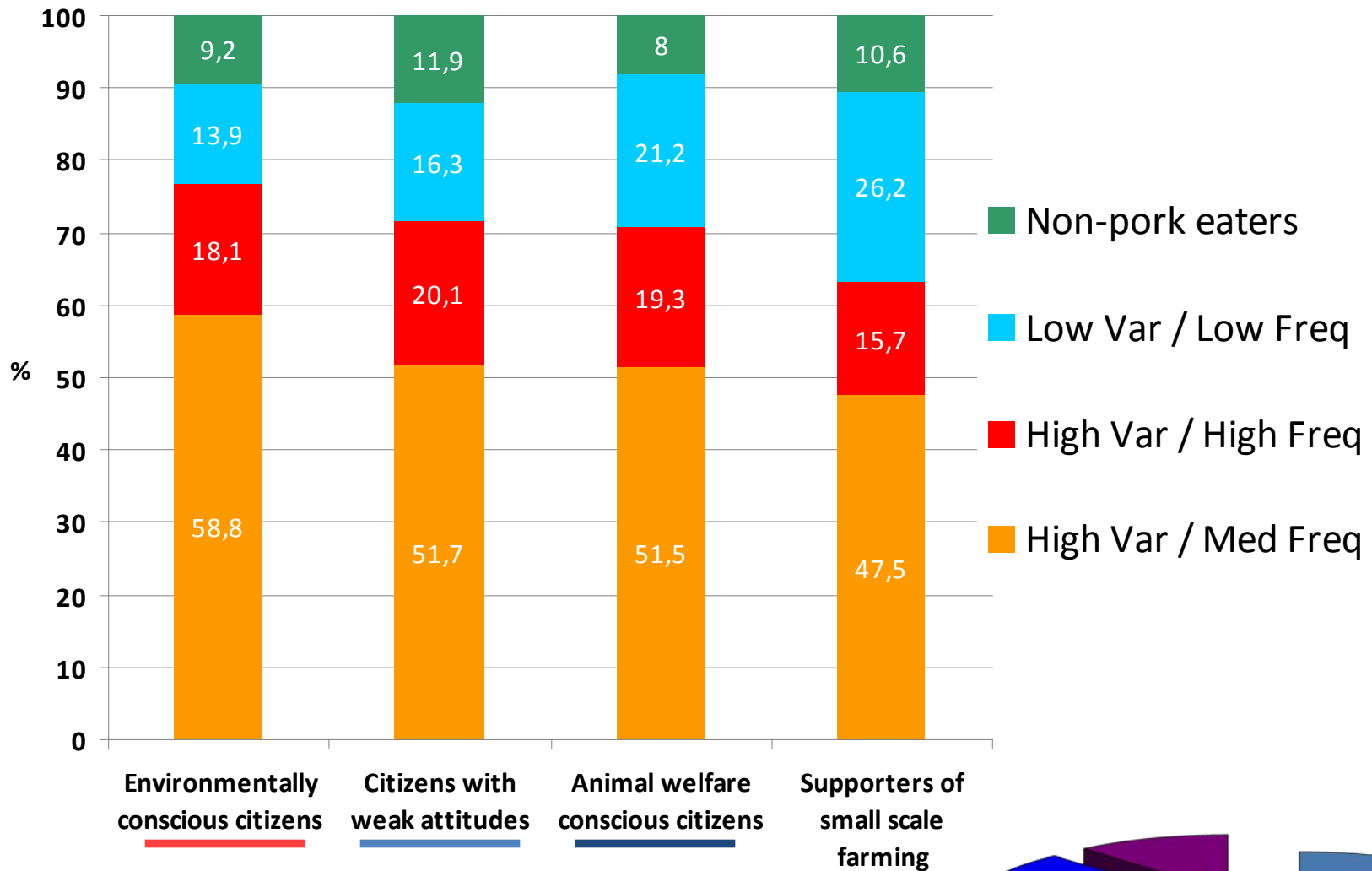


## Four citizen attitude segments



- Broad majority with weak attitudes
- Environmentally conscious
- Animal welfare conscious
- Small farming supporters

# Association between citizen and consumer segments (p=0.009)



## 5. Conclusions and future agenda



1. Trust in beef safety and healthiness
2. Reserves against excessive manipulation and invasive processing
3. Beef eating quality guarantee welcomed

*Further quantification in two experimental quantitative studies*



1. High frequency and variety of pork consumption
2. Differentiation between “good” and “bad” pig production based on animal welfare and environmental protection beliefs
3. Consumer and Citizen segments identified – but weakly related

*Future research on value-added pork product development*

ICoMST 2009

Copenhagen, 16 - 21 August 2009

# European citizen and consumer attitudes and preferences regarding beef and pork

With thanks to:



And colleagues from:

