

Malica



# ASSESSING CONSUMERS' REQUIREMENTS FOR FOOD QUALITY

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## ASSESSING CONSUMERS' REQUIREMENTS FOR FOOD QUALITY

### FOREWORDS

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The purpose of this project is to enhance the capacities of the national research institutes of the participating countries in conducting marketing research. This research is aimed at better embracing the increasing consumer demand for quality and safety of products on national markets.

This document is based on the experience of the Malica research consortium on food market research conducted in Vietnam from 2002 and focussing on quality.

All research quoted as case studies is available at <http://www.malica-asia.org/>

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## INTRODUCTION

The context of food consumption in emerging countries is evolving quickly. The major changes are linked to a process of urbanisation, food industrialisation and an extension of the food chains (globalisation). These trends can be interpreted as a "distanciation" process for consumers (geographic, cognitive etc.), which is likely to generate new demands in terms of quality guarantees and the demand for products including more services. These demands are also related to the food distribution system. Making the food market a motor of agricultural development means that the evolutions of this market must be understood, both in quantitative and qualitative terms.

### A. WHAT DOES "FOOD QUALITY" MEAN?

#### 1. The multi-functionality of food

Food is multifunctional. This means that food can satisfy different functions. These functions are biological, hedonic (i.e. that deals with pleasure), socio-cultural, related to identity and user-friendliness/convenience.

Quality can therefore be considered functionally as the ability of food to fulfil these different functions. Detailing the different functions, we are then able to list the different dimensions of food quality:

- Biological function of feeding, maintaining health
  - Nutritional quality
  - Safety
  - Dietary properties
- Hedonic function (aesthetic, gustative)
  - Food appearance: colour, shape, packaging
  - Organoleptic aspects: taste, smell, texture
  - Digestive quality (feeling of satiety: *rice sticks to the stomach*)
- Socio-cultural function
  - Geographical origin,
  - Social differentiation
  - Fair-trade product/ environmentally-friendly product.
- User-friendliness/convenience
  - Purchasing convenience: packaging (*small quantities according to purchasing power*), *possibility of bargaining, credit*
  - Convenience of use: easy to cook or to store (*instant noodles, edible oil versus pork fat, packaging*)
  - Other aspects: preparation time, stability of the texture (ex: water morning glory staying crunchy after boiling), etc.
  - Possibility of re-using the packing, valorising waste (animal food)
  - Information and traceability of the product

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## 2. Social dimension of quality

Quality is relative to a function. It is also relative to a user and the perception of this user. This involves distinguishing between “objective quality” and “perceived quality”.

Objective quality refers to measurable and verifiable superiority based on some predetermined ideal standards (Ophuis and Van Trijp 1995).

It may differ from **perceived quality** due to asymmetric information (the consumer does not have access to all the information relating to a product); the consumer then may not perceive dimensions of the quality included in the product. However, he may also attribute qualities which are not in fact present in the product (see figure 1).

Figure 1. Objective and perceived quality



Quality is therefore related to the users' perception of the product, but also to the use that this user will make of the product:

e.g.: the required quality for tomatoes used to prepare a sauce is not the same as that for tomatoes used in salads or to decorate a plate. Another example can be seen in Vietnam where chicken intended for “the ceremony for ancestors” should have a good head and comb while chicken intended for young children's meals should be generally tender.

The “ideal standards” mentioned above by Ophuis and Van Trijp in fact depend on many elements such as:

- social knowledge,
- the historic and social context,
- the use/function of the product,
- individual preferences,
- cultural factors.

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For example, with regard to cultural factors, Vietnamese people like mealy tomatoes whereas French ones dislike them. Another example can be seen in Vietnamese cooking which includes complex concepts unknown in western eating practices, such as supple-resistant (*deo*) to qualify good rice noodles, or crispy-crunchy (*gion*) for good rice pancakes (Krowolski and Tung 1997).

Food quality is also the result of a negotiation process. This can be illustrated by the conflict between France and USA regarding the trade of beef with hormones.

Marketing researchers refer to the “4Ps” (perception / person / place / products), which is another way of underlining the fact that quality is a perception process which may have a different content for different people, products and places (Ophius and Van Trijp, 1995).

Food quality is not, then, a univocal concept. It can then be considered as a social construct: criteria for quality vary over time and space and derive from social norms.

### **3. Quality and consumers' requirements**

In consumer market research, the purpose is to focus on consumers' points of view. Then, with regard to quality, we will rather speak of “consumers' requirements for food quality” (or preferences). This assumes that:

- consumers are used as referents,
- the relativity of judgment is recognised,
- the measurement of quality becomes psychological rather than physical.

One must then account for the context in which food is presented and eaten as well as the psychological factors that influence contextual and relative judgment.

### **4. Different dimensions of quality**

Quality is also a multi-dimensional concept.

We shall consider:

- Vertical / horizontal quality:
  - Vertical quality. The product P1 is better than the product P2 (P1 and P2 can be compared on the same scale).
  - Horizontal quality. The product P1 is different from P2: the products are not really comparable and cannot be ranked because they are too different. This is the case, for example, between red wine and white wine.
- Constancy. This dimension of quality refers to the temporal regularity of the characteristics of a product. It is a guarantee for consumers that the quality of the product remains the same from one purchase to another.
- Product/process. Quality can refer to the characteristics of the product itself, but also to the conditions of the production process: this may concern the impact of this process on the environment, on animal welfare, on farmers' livelihoods etc. In this last case, consumers cannot themselves assess the quality linked to the process of the product.

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## B. HOW TO RECOGNIZE QUALITY: CONSUMERS' QUALIFICATION PROCESS

The issue is not only to assess how consumers define quality, but also to analyse how they identify this quality.

For example, the freshness of a product can be assessed through a sensory experience (sight, smell) or by referring to the shelf-life written on the package. In this case, this presupposes trust in the agency which issued the information. Consumers can also rely on their experience of the product (they have never been sick consuming meat from this source).

Another example is when consumers look for red meat as an aesthetic dimension of quality or because this colour is an indicator of the freshness of the meat.

To differentiate these different means of quality assessment, the marketing sciences consider three concepts: attributes, cues and proxies.

### 1 - QUALITY CUES AND QUALITY ATTRIBUTES

A product can be view as a “bundle of attributes” (Lancaster, 1966).

Attributes are related to:

- Price
- Availability: in space (points of sale) and in time (seasonality, regularity)
- Quality

Quality is only one category of these attributes.

**Quality attributes** are product benefits. There are three types of attributes (see table 1):

- Research attributes (or knowledge attributes). Consumers can identify these attributes when buying the product (smell, appearance, etc.).
- Experience attributes. These attributes can only be known after buying the products. It is only when processing or consuming the product that consumers can check the presence of the attribute (e.g.: taste, convenience).
- Belief attributes. Consumers cannot assess the presence of this kind of attribute on their own in the short or medium term. They can only rely on a third party to guarantee attributes such as naturalness, animal-friendly practices, fair trade etc. (quality attributes linked to a production process).

*Table 1. Examples of experience and belief attributes*

<b>Experience quality attributes</b>	<b>Belief quality attributes</b>
Taste Freshness Convenience .....	Healthiness Naturalness Animal-friendly practices .....

- **Quality cues** (see table 2) are specific product characteristics that can be observed by a consumer without actually consuming or using the product. These include:
  - Intrinsic quality cues such as appearance, colour, shape, size and structure
  - Extrinsic quality cues such as price, brand name, country of origin and the store

Table 2. Example of intrinsic and extrinsic quality cues

Intrinsic quality cues	Extrinsic quality cues
Appearance Colour Shape Size Structure	Price Brand name Country of origin Store ...

A cue can be desired for itself: for example looking for red tomatoes for aesthetics reason. In this case, it is similar to a research attribute. However, a cue can also be desired as an indicator of an experience attribute or research attribute: for example, a brand name can be an indicator of taste; red tomatoes can be an indicator of maturity and then of taste. In this final case, when the cue is only an indicator, it may also be called a “**proxy**”.

The issue for the consumers is to translate experience attributes or belief attributes into cues (smell can be an indicator of freshness, etc.).

## 2 - DIRECT AND INDIRECT QUALIFICATION PROCESS. QUALITY SIGNS

**Direct qualification** refers to the possibility for consumers themselves to assess the required quality of a product or some proxies for this quality. This refers to research or experience attributes and to intrinsic cues. This qualification is based on the consumers' senses (smell, touch etc.), skills and knowledge.

**Indirect qualification** refers to the impossibility for consumers themselves to identify the presence of the desired attributes in the products. Consumers can only rely on the information furnished by a third party.

It is referred to as “an indirect qualification process” because of the need in this case for a third party between the products and the consumers. This third party may be the State and the veterinary services in the case of a veterinary stamp or an industrialist and its brand name in the case of nutritional facts mentioned on the packaging of a product. It may also be a producers' association in the case of “geographical indication” etc.

Veterinary stamps, brand names and GIs are all quality signs. Their reliability depends on the trust of the agency issuing the sign (the third party: State, industrialist, producers' association etc.).

Trust becomes essential in an indirect qualification process. It replaces the senses, skills and experiences called on in direct qualification processes.

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### 3- SOME EXAMPLES OF CONSUMERS' REQUIREMENTS AND QUALIFICATION PROCESSES IN VIETNAM

The examples below illustrate Vietnamese consumers' requirements for fresh foodstuffs and how Vietnamese shoppers mobilise direct and indirect qualification processes through attributes, cues and proxies.

Water morning glory (Rau Muong, *Ipomea aquatica*, also known by many other names such as Kangkung, water spinach, water convolvulus) is a leafy green vegetable. It is the most commonly eaten vegetable in the North of Vietnam. Besides the taste, the texture of water morning glory is an important attribute for Vietnamese consumers: water morning glory should stay crunchy after cooking. This consistency is associated with vegetables with stems and leaves which are “green, but not too green”. This consistency can also be assessed by touching the stem with the finger. Safety is an important concern: morning glories are sometimes grown in dirty ponds in peri-urban areas using large quantities of pesticide. They are considered a potentially dangerous foodstuff, in particular because people fear pesticide residues. Buyers feel able to identify a high level of pesticide residues by the smell (a bad smell linked to chemical residues can also appear later when boiling the vegetables). Safety can also be assessed by the vegetable's appearance: the presence of small insects, or insect holes, is seen as a guarantee of reasonable use of pesticide. Finally, the plant should be reasonably sized: a young plant (tender and not too green) which is nevertheless big might reveal the use of chemicals to stimulate the growth.

Bigger animals (pork is the most commonly eaten meat in Vietnam) are slaughtered during the night in abattoirs inside the town itself and are available to consumers within a few hours. Shoppers smell the meat to assess its freshness. Touching it may also provide a clue to freshness: meat should not be too sticky to the touch. Interestingly, people reject cool meat, as this means that the meat has been stored in a fridge during the night and that it does not come directly from the abattoir, so that a low meat temperature means that it is not fresh

The same process can be described for tomatoes: Hanoi consumers look for big, ripe tomatoes which are firm, with a pinkish-red skin.

As usual, freshness is an important factor. According to buyers, a green stem is a reliable sign of freshness and also indicates natural ripening. The presence of a peduncle on a tomato is a pertinent proxy for freshness. The fact of the matter is that it is best to take the ‘stems’ off tray wrapped tomatoes so they will not pierce other tomatoes during transport. Therefore, tomatoes with their peduncles intact are tomatoes which have not travelled and so have been produced nearby and are most probably fresh.

Safety considerations are also important with regard to tomatoes. People fear pesticide residues and artificial ripening using acetylene. Indeed, customers claim that farmers, and in particular Chinese farmers, use a particular product known as *dat den* in Vietnamese (soil-lamp). This probably refers to the use of ethylene carbide to ripen bananas, tomatoes and persimmons. When it comes into contact with water, it emits acetylene, a gas which is well known for its ability – among other things – to ripen some types of fruit. This gas is often replaced by the smoke from incense sticks. Buyers do not clearly link this product to possible health damage. Their concerns may be linked to a more general reluctance to accept unnatural processes.

And although red colouring is appreciated, it is also viewed with suspicion because it may indicate artificial ripening. Similarly, a tomato which is too big points to the use of growth-stimulating chemicals. For these two reasons, suspicious buyers prefer smaller pink tomatoes to big red ones.

As one consumer said, “to buy, we have only our eyes” or “it’s a question of experience”: in other words, consumers can only trust themselves. However, as these examples show, many of the senses, and not only sight, are used to assess product quality. Moreover, buying at a market is not just a face-to-face issue between buyer and product. It also involves other actors, in particular the sellers. Shoppers often ask sellers questions, generally with regard the geographical origin of the products (Tran Thi Tham 2005). They also look at the hygiene of the stand (Vu Tring Binh 2002). There is a little written information, such as veterinary stamps or labels but shoppers rarely trust it.

Table 3. Cues and attributes of sanitary quality for tomatoes in Vietnam

<b>Intrinsic quality cues</b>	<b>Extrinsic quality cues</b>
Even colouring Not too big, not too red	Bought in supermarket, not from China, not off-season
<b>Experience quality attributes</b>	<b>Belief quality attributes</b>
Never been sick	No ethylene, no pesticides

Table 4. Cues and attributes of quality for pork meat in Vietnam

<b>Intrinsic quality cues</b>	<b>Extrinsic quality cues</b>
Good colour (muscle red), Skin with fair colour without spot White fat, thick layer of fat Little intra-muscular fat No bad smell Meat lightly sticky when touched (mem) Warm meat	Clean stall, stall higher than 1m Clean seller Veterinary stamp Bought during the morning
<b>Experience quality attributes</b>	<b>Belief quality attributes</b>
Tough, tender Never been sick Scented when cooked	From mountainous area No industrial feeding No hormone residues No antibiotic residues From a clean slaughterhouse

Shopping in supermarket is quite a different process. Most of the products sold in supermarkets are pre-packed, or served by employees wearing gloves, avoiding direct contact. The qualification process is more indirect. Trust is based on the reputation of the

supermarket and that of the brand name of the products. Higher prices may also be considered as an indication of higher quality for some consumers. This may explain the success of supermarkets with inexperienced shoppers like men or young customers and anyone who does not have the skills required when shopping at open-air markets to distinguish poor-quality foodstuffs from high-quality ones.

## C. CREDIBILITY OF QUALITY SIGNS

### 1. Quality signs and trust

Industrialisation of the food chain and trends in consumers' demands for quality in emerging economies contribute to an increasing importance of belief attributes, indirect qualification processes and quality signs.

Issuing quality signs is not enough to inform consumers. Consumers' trust in the agency responsible for issuing the signs is essential to guarantee the credibility of these signs.

There are two levels of trust:

- Trust in the authenticity of the issuer. This is related to the problem of fake products: for example, products may be sold under the brand name "Nestle" but may be fake products from another industry, using Nestle's reputation to increase its sales.
- Trust in the ability and the good will of the issuer of the sign.

In this section, we will mainly refer to the second level of trust.

### 2. Quality convention

According to Sylvander (1995 based on Boltanski and Thevenot 1987), trust in food relies on quality conventions. These conventions may be understood as common beliefs between sellers and buyers, facilitating agreement on the quality of the product and thus making the transaction possible.

There are five types of quality convention: market convention, domestic convention, industrial convention, civic convention and opinion convention (see table 5).

*Table 4. Quality conventions (Marescotti 2000 based on Sylvander 1995 - Boltanski and Thevenot, 1987)*

Market convention	Based exclusively on market relations and price: the actors themselves are able to assess the quality of the good at the moment of the transaction; they do not need further support to justify their actions other than the price.
Domestic convention	The co-ordination among actors is based on a face-to-face relationship, on personal trust established during previous transactions. The connections established between the actors are stable and lasting over time.

Civic convention	The coordination and justification of actions is based on the actors' adherence to a core of collective principles; the individual actors renounce their own individuality and do not consider their own personal interests in order to concentrate on the common good and/or aim.
Industrial convention	The coordination and exchanges are based on the respect of standards: quality is a given if the characteristics of the good/service comply with a set of standardised and codified rules.
Opinion convention	Contrary to the domestic convention, but similar to the market convention, the opinion convention is not heavily based on a direct experience, recurrent transactions or memory. The quality of a good is judged exclusively by the opinions of others and the reputation of the operators.

For example, to obtain guarantees for the quality of the foodstuffs they buy:

- Consumers can rely on the price as an indicator of the quality of a product, ("the higher the price, the higher the quality"). This refers to the market convention.
- Consumers can rely to their usual seller ("she has never misled me"). This refers to a domestic convention.
- Consumers can rely on the presence of the veterinary stamp issued by a state representative. This refers to a civic convention.
- Consumers can rely on the brand name of the products. This refers to an industrial convention.
- Consumers can rely on the opinions of and advice from her/his friends or relatives. This refers to an opinion convention.

### 3. Interactions between quality signs

The credibility of a quality sign must be backed up by the credibility of the institutions. It is also backed up by the context of the product sale and the presence of other quality signs. And consumers generally turn to different types of sign to assess the quality of a product. Quality signs do not always have additive effects. They can interact in many ways. In the field of marketing, these interactions are called "congruence" (Keller, 1993). They may have amplifier effects or antagonist effects.

A quality sign can therefore be more or less reliable according to the point of sale (as shown in case study 5). This can be particularly important in the case of the first level of trust mentioned above: for example, trust in the authenticity of the issuer will be lower in the case of a product with a famous brand name sold by a street vendor than for the product with the same brand name sold in a high-class shop.

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## CONCLUSIONS: FROM CONSUMERS' REQUIREMENTS TO MARKET DEMAND

Studies on consumers' requirements for food quality have to take into account the fact that quality does not refer to objective standards but to a multitude of uses and users.

Consumers' requirements are not only related to a set of characteristics included in the products. They are also related to a production process. They include a demand for reliable quality signs and for trustable institutions. This is a crucial issue for countries where the process of industrialising agribusiness occurs very quickly and consumers have to shift from direct qualification processes to indirect ones very quickly too.

Surveys of consumers' demand for food quality have some limits which are important to highlight. The link between consumers' requirements (including price, availability, convenience etc.) and consumers' demand for marketed products is not quite as direct as we might think. For example, consumers may express concern regarding pesticide residues on vegetables. However, due to the low level of trust concerning vegetables sold with supposedly low pesticide residues ("safe vegetables" in Vietnam), consumers may prefer to rely on their own practices of soaking and washing vegetables. Consumers may be demanding for a higher quality of pork meat and they may declare, in the context of the survey, that they are willing to pay a premium for it, but in reality, in the context of purchasing food, they may for the same price prefer to buy beef, which has a higher cultural value, than pork, which has a higher intrinsic quality.

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## CASE STUDY 1. Consumers' perceptions of food-related risks

Source: FIGUIE M. (2004). Perception of food-related risks by consumers in Hanoi, Vietnam. CIRAD/IOS, MALICA (CIRAD/IOS/VASI/RIFAV), Hanoi, 2004, 18 p.  
<http://agents.cirad.fr/index.php/Muriel+FIGUIE/Publications>

### Objective and methodology of the study

In Vietnam, we have witnessed increasing concern from consumers and from certain public institutions with regard to food safety. In 2002, in order to better understand the point of view of urban consumers on this issue, the **CIRAD** (Centre de coopération internationale en recherches agronomiques pour le développement, France) and the **IOS** (Institute of Sociology of the Vietnamese Academy of Social Sciences, VASS, ex-CNSSH) conducted a survey of consumer perceptions of food health risks.

The questionnaire was applied to 200 households in central Hanoi and to 40 households in the peri-urban area of Hanoi, in the village of Mông Phu.

The survey mainly dealt with the following items:

- the socio-economic characteristics of interviewees
- the perceived links between food and health
- the evolution of the quality of food and meals and food safety
- the nature and characteristics of food-related risks
- an evaluation of personal diet
- reported practices to avoid risks
- a prospective test: profile of the victims of food-related diseases

The data were recorded in an Access database.

### Results

We present only some of the results regarding demand for quality.

#### 1. Perceived changes in the quality of meals and the quality of foodstuffs

Most consumers feel that the quality of their meals has improved compared to ten years ago (for nearly 94 % of the interviewees, see table 1). This perceived improvement in the quality of meals is the result of product abundance and greater diversity. However, they do not have the same opinion about the quality of the products currently available on the markets: around 60% believe that quality of the marketed food products has decreased.

**Table 1. “What do you think about the change over the last ten years in (1) the quality of your meal and (2) the quality of marketed foodstuffs in general?” (n=240)**

	Quality of the meal	Quality of the foodstuffs
<b>Has improved</b>	93.8%	32.5%
<b>Has not changed</b>	4.6%	5.8%
<b>Has decreased</b>	1.3%	59.6%
<b>No opinion, no answer</b>	0.4%	2.1%
<b>Total</b>	100.0%	100.0%

This is true to such an extent that, in the minds of nearly 65% of consumers, food products today represent a health risk (table 2).

**Table 2. “In your opinion, do foodstuffs in general present a health risk today?” (n=240)**

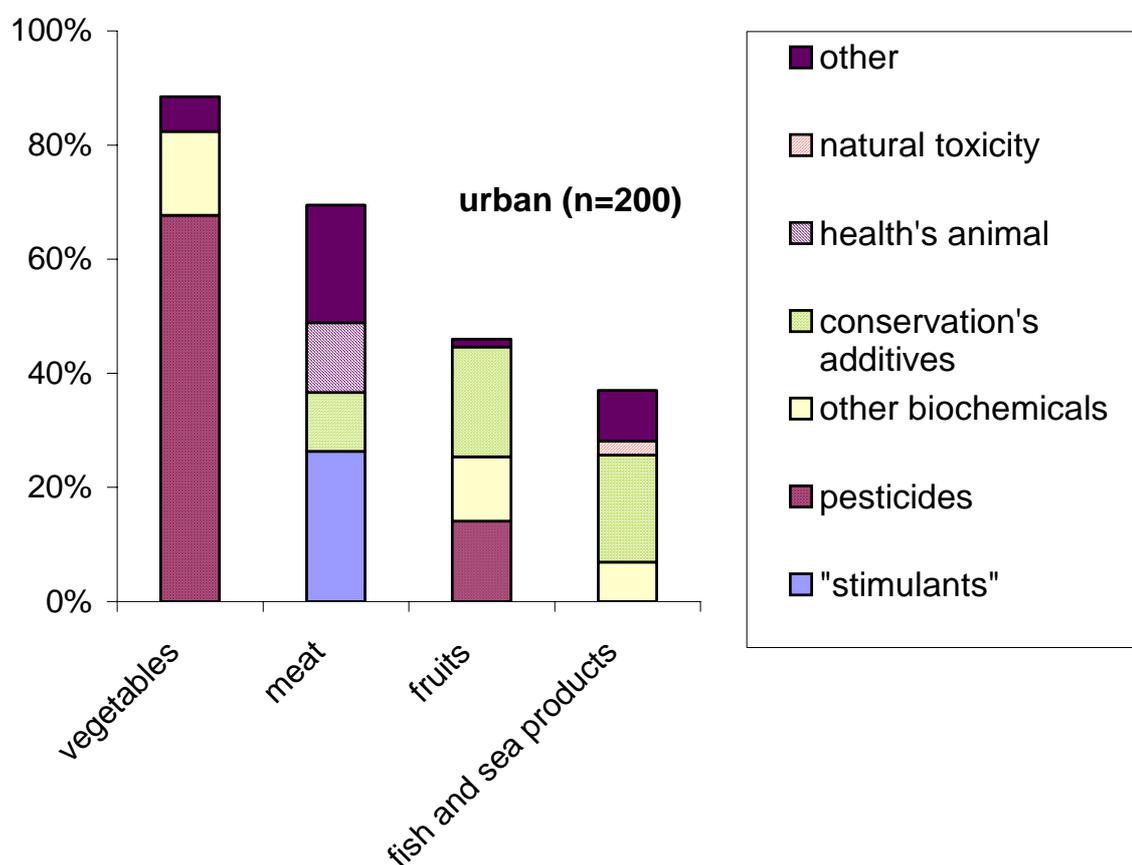
	% of the answers
<b>Not at all</b>	1.7%
<b>Not really</b>	34.6%
<b>Rather dangerous</b>	57.1%
<b>Very dangerous</b>	2.9%
<b>No opinion, no answer</b>	3.8%
<b>Total</b>	100.0%

## **2. Dangerous foodstuffs**

In answering the question “Mention three foodstuffs which are, in your opinion, the most dangerous to consumers’ health”, consumers topped the list with “vegetables”, followed by meat, fruit and then fish. And the dangers they quote only refer to food-borne diseases (rather than nutritional diseases).

In the case of vegetables, it is the likely presence of pesticide residues which gives cause for concern. With fruit, there is the added problem of the use of preservatives in which the fruits are supposed to be soaked after harvesting (a practice in the respondents’ minds essentially associated with fruits imported from China). As for meat, the criticisms are more varied, but mainly concern the use of “stimulants” (a relatively vague term in the dialogue of the consumers but which would seem to correspond to the growth activators used in animal food). With regard to fish and other seafood (prawns, crabs, etc.), it is the use of preservatives (urea, formalin, borax, etc.) which is criticised.

**Figure 1: Dangerous foodstuffs and cause of dangers**



### 3. Dangerous vegetables and meat

(table 3)

In mentioning vegetables as a dangerous foodstuff, interviewees were mainly referring to water spinach (*Ipomea aquatica*) followed by rau cai ("rau cai" represents a rather vast family of vegetables, belonging to the genus *Brassica Raphanis* and *Nasturtium*). Further down the list are the yard-long bean (*Vigna sesquipedalis*) and the cucumber (*Cucumis sativum*).

With regard to meat, pork and chicken topped the list.

We should note that the respondents cited the vegetables and animals most commonly consumed in Hanoi: rau cai and water spinach for vegetables, pork followed by chicken for meat.

**Table 3. Dangerous vegetables and meat (240 respondents, many answers were possible)**

Vegetables	% of answers related to vegetables
Water spinach	34.3%
“Rau cai”	37.4%
Bean, yard-long bean	8.5%
Cucumber	6.3%
Other	13.5%
Total	100.0%

Meat	% of answers related to meat
Pork	56.1%
Chicken	22.7%
Beef	5.6%
Processed meat	10.6%
Other	5.1%
Total	100.0%

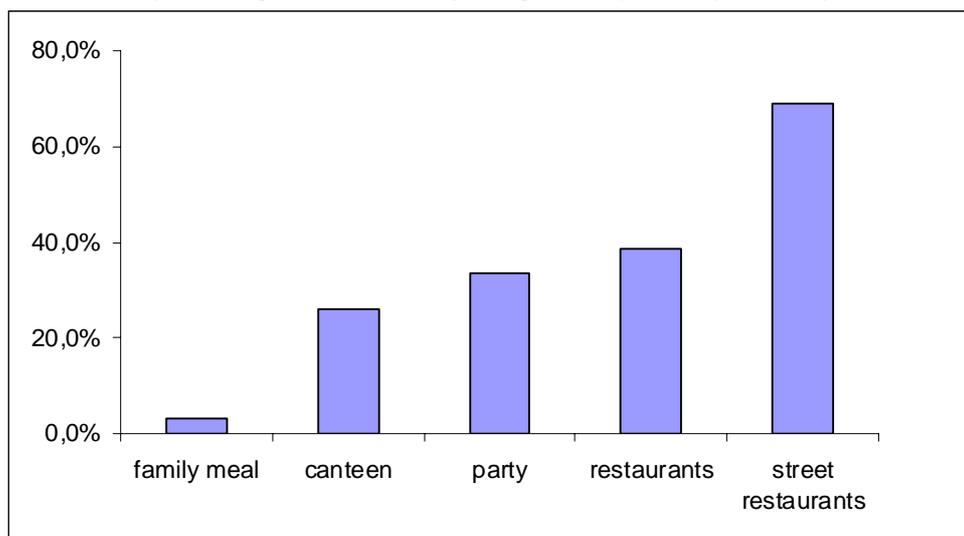
#### 4. Risks and places of eating

In spite of the dangers associated with the main foodstuffs, respondents are not concerned when they eat at home. Most of them think that the meals they prepare themselves present little or no danger (see figure 2).

The home is considered a safe place. The most dangerous places are indeed street restaurants.

**Figure 2. “Do you think that there is any danger of falling victim to food-borne diseases after eating...”** (answers: not dangerous at all / not very dangerous / quite dangerous / very dangerous)

% answers “quite dangerous” and “very dangerous” (240 respondents)

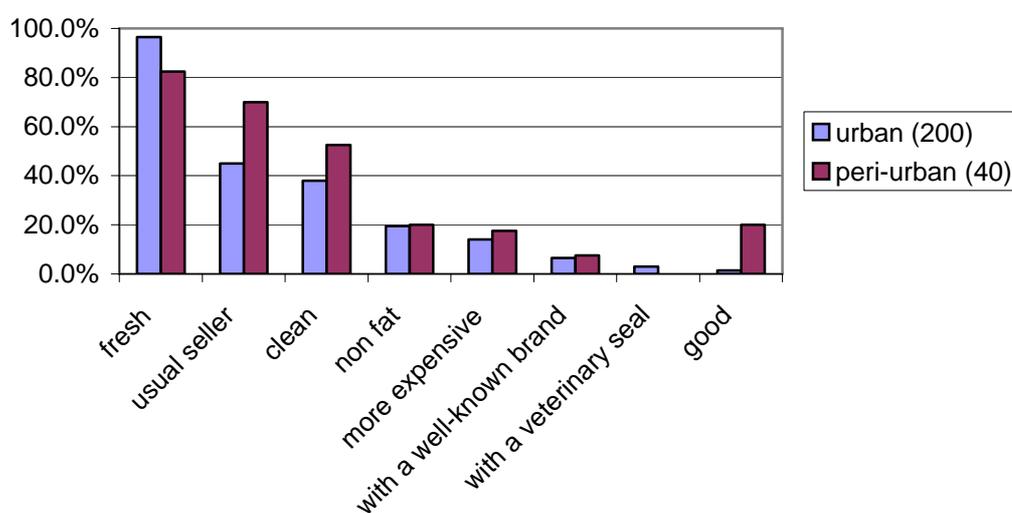


It is interesting to compare these data with those provided by the Vietnamese Ministry of Health: 60% of food-borne outbreaks occurred following family meals, 6% in canteens, 22% at parties, 10% in street restaurants and 3% in school canteens (in relation to the proportion of meals taken in these different places)

## 5. Practices to avoid risks

To justify this absence of risks related to domestic meals, respondents evoke their *know-how*. This knowledge deals with their way of choosing food and preparing it. The freshness of products is by far the first guarantee of safety. This supposes a daily trip to the market, early in the morning if possible to have the largest choice. Buying from the usual retailer is next in importance (answers relating to “clean food purchase” need to be specified). The second stage in ensuring food quality and hygiene is the method of preparation. This presupposes ways of making foodstuffs safe to eat by soaking, washing and peeling vegetables and washing and cooking meat for a long time (see figure 3).

**Figure 3. “How do you choose the foodstuffs you cook to avoid falling ill?” (spontaneous answer, many answers were possible)**



## Conclusions

The respondents in our survey expressed great concern regarding the food safety issue, especially with regard to the most commonly consumed products (although it should be noted that rice was not mentioned as a potentially dangerous foodstuff). Nevertheless, respondents are confident in their own practices to avoid risks by choosing and preparing foodstuffs. They rely only to a very small degree on a third party to guarantee food quality, with the exception of their usual retailer.

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## CASE STUDY 2. Consumer's perceptions of the quality of tomatoes available in the market places

Source: FIGUIÉ M., 2004. Consumers' perception of vegetable (tomato and water morning glory) quality in Vietnam. Hanoi, FSP Project 2000-56 "SUSPER: Sustainable development of peri-urban agriculture in South-East Asia" (Kingdom of Cambodia, Lao PDR, Vietnam RS), 44 p.

<http://www.avrdc.org/susper/publicationpage.htm>

### Objective and methodology of the study

This study aimed to identify Vietnamese consumers' perceptions of vegetables available on Hanoi markets. This survey was limited to two common species, tomato and water morning glory and how consumers perceived the different origins of these vegetables present on Hanoi markets (tomatoes and water morning glory produced in the peri-urban area of Hanoi, produced in the region of Da Lat, imported from China, sold with the "safe" label, sold with the organic label and tomatoes and water morning glory sold in supermarkets). We looked for what could be considered the attributes of each of these products or, in other words, the characteristics of these products as they are perceived by the consumer.

In order to assess which of these attributes may be considered as quality attributes, we also looked for attributes which consumers associate with a 'quality water morning glory' or a 'quality tomato'.

This survey was based on 55 in-depth interviews. All of the subjects were women, since in Vietnam they are responsible for the shopping. Data were collected using the associative method, through word association: the subjects were given one or several 'trigger words' and asked to say whatever came into their mind.

We proceeded by pairs of trigger words. We will only present here the results for tomatoes and the following combinations:

#### Pairs of trigger words

Tomato	x	Good quality
		Produced in China
		Sold in supermarket

In this way we asked consumers to use a list of words to describe what, in their minds, represents a quality tomato, a tomato from China, a tomato sold in supermarket.

From the words spontaneously associated by the respondents, it was possible to obtain a picture of how the subjects perceive the products.

### Main results

#### 1. What is a high-quality tomato?

Quality tomatoes are associated with the categories 'Vietnamese tomato', 'Da Lat tomato', 'Van Noi tomato', 'tomatoes sold in safe vegetable shops and supermarkets'. It is contrary to the 'Chinese tomato' category.

*(Van Noi is an agricultural co-operative producing safe vegetables in the peri-urban area of Hanoi. Da Lat is a production area in the south of the country). Safe vegetables are a*

kind of IPM vegetables produced with a limited use of chemical products and using clean water. These vegetables are sold in speciality shops, known as 'safe vegetable shops', at certain market stalls with the sign 'rau sach' or 'rau an toan' and in supermarkets – often with no distinctive marking or just the name of a cooperative).

Examining the answers by theme allows us to understand the elements that make up a quality tomato (see table 1).

**Table 1. Descriptions of a quality tomato**

Themes discussed	Frequency of associations	Content
Associated categories	20	Origin: Vietnam (6), not Chinese (6), Da Lat (1), Van Noi (1), Point of sale: safe vegetable shop (5), supermarket (1)
Pulp texture	36	Floury (17), firm/not crushed (15), a bit soft/not too hard (3), not much water (1)
Ripeness	33	Ripe (10) but not too ripe (2), naturally ripe (9), homogeneous (12)
Stem	25	Present (6), green (11), slender (7), not too green (1)
Shape	24	Big (6) but not too big (5), round (5), slightly elongated (4), a little flat (3), small (1)
Freshness	23	Fresh tomatoes (12) and fresh stems (11)
Colour of skin	25	Pink (9), red (8), homogeneous colour (4), no spots (4)
Seeds	15	Little (13), no seeds (1), non-green seeds (1)
Skin	11	Smooth (15), not too smooth (1), thin (3), thick (2)
Colour of pulp	6	Pink (4), red (2)
Sanitary quality	18	Naturally ripe (9), sold in safe vegetable shops (5), safe (3), unsprayed (1).
Other	5	Expensive (1), not very attractive (3), tastes good after being cooked (1).

A good tomato is one which is floury and firm with few seeds. It must be ripe and evenly coloured.

It must above all have ripened naturally. This remark is explained by the subjects as related to a product often used by farmers known as *dat den* (soil-lamp), which is also often mentioned when speaking of a 'Chinese product'. This is a product which accelerates the maturation and colouring of tomatoes.

Freshness is an important element. A green stem is, according to the subjects, a sure sign of freshness and also indicates natural maturation.

While red colouring is appreciated, it is also suspicious because it may indicate artificial maturation. Similarly, a tomato which is too big points to the use of growth-stimulating chemicals. For these two reasons, it is best to choose a pink and smallish tomato.

Thus, the size and colour of a tomato are two attributes which create tension between the search for sanitary quality and visual quality.

The skin must be thin, although a minority prefers a thick skin. The difference may lie in the use of the tomato, either in a salad or a sauce.

It should be noted that the taste quality was only mentioned by one subject who mentioned ‘taste after cooking’.

It should also be noted that a starchy or floury texture is highly appreciated by Vietnamese consumers even though it is considered a defect in Europe.

In addition to these attributes, which can be referred to as intrinsic since they concern the product itself, there are also extrinsic attributes such as origin (Vietnamese vs. Chinese), point of sale (safe vegetable shops) and price (expensive).

The sanitary quality which most interests us has already been widely mentioned in such terms as ‘ripened naturally’ (9), ‘sold in safe vegetable shops’ (5), ‘clean, safe’ (3), ‘without spraying’ (1).

## 2. Tomatoes imported from China

Half of the interviewees believed that the Chinese tomato is not to be found on Hanoi markets. They are not familiar with them and do not knowingly buy them. Those who do know about Chinese tomatoes associate them with markets rather than supermarkets, where they are supposedly never sold, and distinguish them from tomatoes from North Vietnam and Da Lat tomatoes. Chinese tomatoes are considered less tasty than other varieties.

Even before taste is mentioned, Chinese tomatoes are given a low score for their sanitary qualities and have been described as ‘frightening’. Consumers are frightened by the suspected use of chemicals, especially in ripening. These chemicals are responsible for the ‘frightening’ red colour which indicates artificial ripening: the tomato is a bright homogeneous red but not really ripe, as can be noted from its taste or the colour of its seeds which are still green.

**Table 2. Description of tomatoes from China**

Themes discussed	Frequency of associations	Content
Presence	25	Don't know/don't buy (19), no difference (6)
Negative intrinsic attributes	29	Not tasty or less tasty (13), hard (6), very red (4), not floury (3), not very fresh (3)
Positive intrinsic attributes	22	Big (7), round (3), thin soft skin (3), floury (3), attractive (3), few seeds (3)
Sanitary quality	16	Toxic (8), frightening (8)

## 3. Tomatoes sold in supermarkets

This category of tomato is associated with Vietnamese tomatoes, as opposed to Chinese tomatoes, as well as with co-operative produced tomatoes and safe tomatoes. It is seen the opposite of ‘marketplace tomatoes’. For some, however, the only difference between open-market and supermarket tomatoes is the way they are neatly presented and wrapped.

Despite some doubts, however, for many subjects the main attributes of these tomatoes is the confidence one may have in their sanitary quality.

To this must be added the following qualities: good taste, floury texture, nice colour. These qualities are linked to the more rigorous tomato selection process in supermarkets. Safe and tasty, these tomatoes are ideal for salads.

They are nevertheless expensive and their freshness is open to debate: some consider them fresh while others say they are kept in refrigerated chambers or stands. In this way they can be kept longer but this contradicts the idea of freshness. Another problem with tomato sales in supermarkets is that they are often pre-wrapped, ruling out personal selection by the consumer.

**Table 3: Descriptions of supermarket tomatoes**

<i>Themes discussed</i>	<i>Frequency of associations</i>	<i>Content</i>
Category	16	Do not know because never bought (8), no difference (4), only the presentation is different (4)
Positive intrinsic attributes	29	Good taste (7), fresh (6), floury (6), no or few seeds (3), selected (3), green stems (2), pink (2)
Negative intrinsic attributes	14	Not very tasty (4), not fresh (4), small (3), hard (3)
Extrinsic attributes	13	Expensive (7), sold in an attractive location (3), impractical to buy (3)
Sanitary quality	16	Safe, clean (13), non-use of ripening chemicals (3)
Trust	11	Trust (9), lack of trust because they are kept for a long time (2)
Others	6	Good for salads (4), watery (2)

The perception of these different types of vegetables can be summarised in a diagram showing health quality on one axis and other quality attributes on the other axis (figure 1).

This diagram provides a two-dimensional representation both of safety and of other aspects of quality, as expressed by consumers. The diagram should be interpreted in the following way:

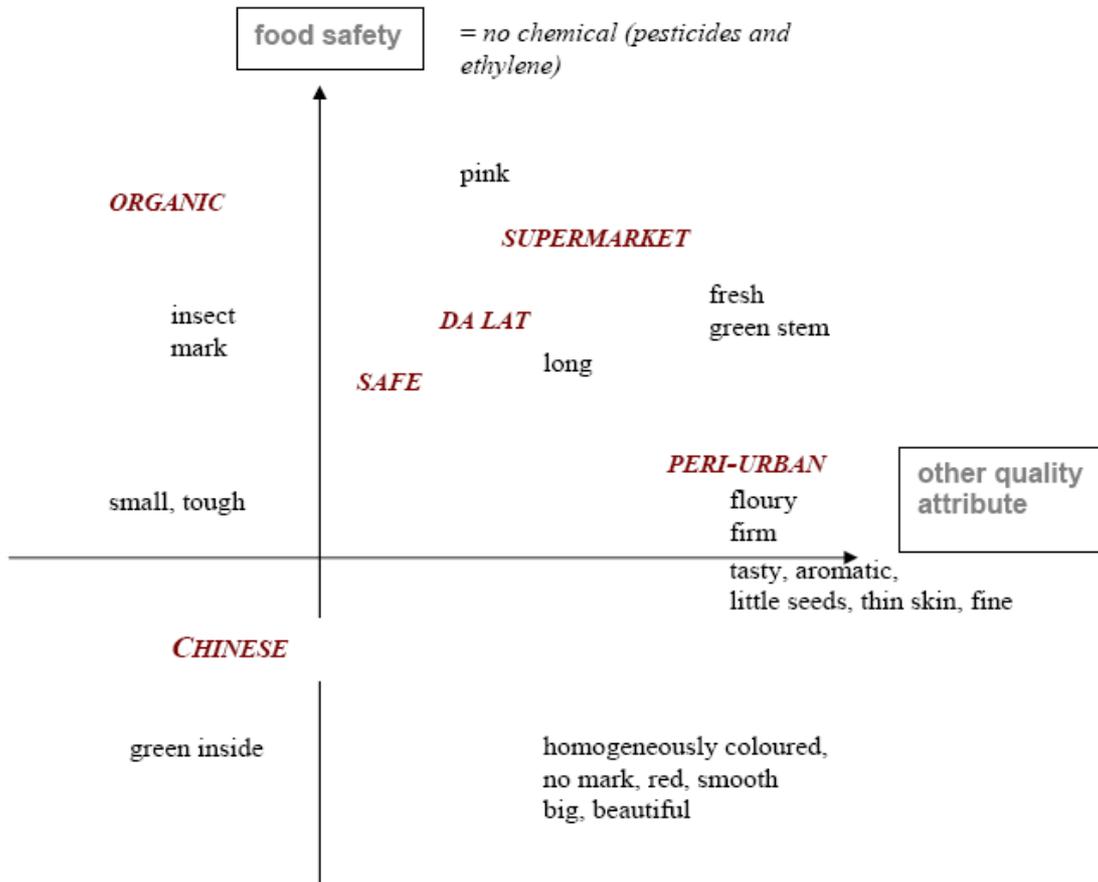
An attribute which is close to the horizontal axis (that of non-health quality) and to the right of that axis is an attribute which is neutral from a food safety point of view but which contributes to other quality aspects, such as appearance and taste. For the tomato, firmness would be a good example of this.

An attribute such as red colour, on the other hand, is negative from the food safety aspect but positive from other quality aspects.

Insect holes may be positive in view of food safety but are negative attributes for other quality aspects.

Green seeds are perceived as negative for both considerations.

Diagram 1: Quality attributes of tomato



## Conclusion

The importance given to the point of sale and salesperson as a sign of extrinsic quality helps us to understand why salespeople do not consider it important to post other information: we have noticed that salespeople in Hom market sell 'safe' vegetables but do not advertise the fact since it is supposed to be obvious for their clients, as the sellers declared to us. We were also able to note that even in the midst of the avian flu crisis, poultry sellers did not post the certificates they had received from the Health Services. These signs (veterinary stamps, 'safe vegetable' certification etc.) are not as credible for the consumer as the salesperson's word. This trust has an important place in Vietnamese trade. It should be noted that one of the first steps taken by the Vietnamese health authorities during the recent avian flu crisis was to make wholesale poultry vendors sign a promise not to sell sick animals (civic convention).

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### **CASE STUDY 3. Consumer's requirements for pork meat and willingness to pay**

*Source:* Hoang Vu Quang, Nguyen Ngoc Luan, Diaz V. (2007). Pratiques et perceptions des consommateurs sur la qualité de la viande de porc au Vietnam. Malica Report research

Study conducted in the framework of the Duras Project (Agriculture and Sustainable Development) funded by the French Ministry of Foreign Affairs, involving Casrad, Rudec Cirad, ILRI “Improving the pig and the pig meat marketing chain to enable small producers to serve consumer needs in Vietnam and Cambodia”

#### **Objective and methodology of the study**

The project aimed to support pork producers from Nam Sach cooperative in the North of Vietnam willing to invest in higher quality pork production. The objective of the present study was to assess consumer satisfaction concerning pork meat available on the market and their willingness to pay for meat of a higher quality.

A quantitative questionnaire was used to interview 200 respondents in Hanoi, 200 in the city of Hai Duong and 200 in the district of Nam Sach.

See questionnaire below

#### **Results**

We present only some of the main results of this study

##### **1. Consumers' point of view concerning pork meat quality available on the market**

- 25% of the respondents claimed they were dissatisfied with the present quality of fresh pork meat available in the marketplaces.
- 98% of the respondents claimed to be concerned by safety when purchasing fresh pork meat.
- 56% of the respondents claimed to have difficulty in assessing the safety of the pork meat that they buy.
- Their main concern related to:
  - the potential presence of chemical residues in the pork meat: antibiotic residues, hormone residues,
  - the level of hygiene in the production and slaughtering processes.

Nevertheless, 35% of respondents felt that the quality of pork meat had improved during the previous 10 years, 28% felt that the quality had not changed while 25% believed that quality had declined (12% had no opinion).

This may indicate that consumers, independently of the perceived trend of food quality, are more demanding now than they were in the past.

##### **2. Consumer willingness to pay for higher-quality products**

Respondents claimed to be willing to pay a premium for certified pork meat (79%), for safer pork meat (51%), for pork meat with a nicer colour (35%), for pork raised without using industrial feed (30%) and for local breeds of pigs (16%).

The average premium respondents were willing to pay for these attributes varied from 1,700 to 3,500 dongs per kilo (2,000 dongs/kg represents a 5% premium considering the present price of pork meat).

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**Table 1. Consumer willingness to pay for higher-quality pork meat**

<b>Attributes</b>	<b>% of respondents willing to pay a premium</b>	<b>Willingness to pay Vietnamese dong/kg</b>
Certified pork meat	79	3,464
Safer pork meat (sanitary quality)	51	2,138
Pork meat with a nicer colour	35	1,838
Pork raised without using industrial feed	30	1,723
Pork with less intra muscular/extra muscular fat	25/30	1,783
Local breed of pigs	16	2,016

There is a strong demand for certification, which is not related to clearly defined attributes. Certification appears to be an attribute per se.

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**Annex: Questionnaire used for collecting data. Case study 3**

Questionnaire partly based on Sanders, D.R., Moon, W., Kuethe, T., Beck, R. and Young, A., 2004. Assessing the Potential for Value-Added Pork in Illinois. Final report, Illinois Pork Producers Association, AgriFirst, SIUC College of Agricultural Sciences, Carbondale, Illinois.

(sections on quality)

2. When you go shopping for pork, what would you say are the most important factors that influence your choice? (*max 3 answers to be chosen in the list*)

1. Price	6. Brand name
2. Freshness	7. Habit
3. Colour of pork	8. % of fat
4. Food safety	9. Origin of pork
5. Packing	10. Pig breed

Other: .....

3. Rate your level of satisfaction with fresh and processed pork products that you usually purchase?

	<i>Strongly satisfied</i>	<i>Rather satisfied</i>	<i>Rather unsatisfied</i>	<i>Totally unsatisfied</i>
(1) Fresh pork				
(2) Processed pork				

4. Rate your level of satisfaction with the following attributes of **fresh pork** products that you buy?

<b>Attributes</b>	<i>Strongly satisfied</i>	<i>Rather satisfied</i>	<i>Rather unsatisfied</i>	<i>Totally unsatisfied</i>	<i>Do not care</i>
(1) Level of intramuscular fat of fresh pork that you purchase					
(2) Level of extra-muscular fat of fresh pork that you purchase					
(3) The colour of fresh pork that you purchase					
(4) The hygiene of fresh pork that you purchase					
(5) The breed of fresh pork that you purchase					

5. Rate your level of satisfaction with the following attributes of **processed pork** products that you buy?

Attributes	Strongly satisfied	Rather satisfied	Rather unsatisfied	Totally unsatisfied	Do not care
(1) The presence of borax in the processed pork you buy					
(2) The presence of MSG in the processed pork you buy					
(3) The packaging of the processed pork you buy					

6. Rank your level of agreement with the following statement (1 = totally agree; 2 = tend to agree; 3 = tend to disagree; 4 = strongly disagree; 5 = not care)?

<b>Fresh pork</b>	Agree		Disagree		Do not care
	totally	tend to	tend to	totally	
"Extra-muscular fat is an important consideration when I buy fresh pork"					
"Intra-muscular fat is an important consideration when I buy fresh pork"					
"Hygiene is an important consideration when I buy fresh pork"					
"Colour is an important consideration when I buy fresh pork"					
"Pig breed is an important consideration when I buy fresh pork"					

<b>Gio (processed pork meat)</b>	Agree		Disagree		Do not care
	totally	tend to	tend to	totally	
"Use of borax is an important consideration when I buy fresh pork"					
"Use of MSG is an important consideration when I buy fresh pork"					
"Packaging is an important consideration when I buy fresh pork"					

## B/ WTP

7. Would you be willing to pay a premium to purchase fresh pork fillet with the following characteristic? (If yes, indicate on a payment card how much you would be willing to pay using an increment up to 500VND or greater)

7.1. Less extra-muscular fat (than the pork you buy usually)	1. No	2. Yes	d/kg
7.2. More intra-muscular fat (than the pork you buy usually)	1. No	2. Yes	d/kg
7.3. Less intra-muscular fat (than the pork you buy usually)	1. No	2. Yes	d/kg
7.4. Nicer colour (than the pork you buy usually)	1. No	2. Yes	d/kg
7.5. Better hygiene (than the pork you buy usually)	1. No	2. Yes	d/kg

7.6. No industrial feeding	1. No	2. Yes	d/kg
Industrial feeding	1. No	2. Yes	d/kg
From pigs with more exotic blood	1. No	2. Yes	d/kg
From a local breed	1. No	2. Yes	d/kg

8. Would you be willing to pay a premium to purchase Gio which you can be sure is:

8.1. Without borax or any chemical conservative	1. No	2. Yes	d/kg
8.2. Without MSG	1. No	2. Yes	d/kg
8.3. Packed in banana leaves	1. No	2. Yes	d/kg
8.4. Packed in plastic bag	1. No	2. Yes	d/kg
8.5. Packed in banana leaves and plastic bag	1. No	2. Yes	d/kg

9. Same for a hypothetical product:

9.1. Fresh pork with less extra-muscular fat, nicer colour, more guaranteed hygiene (than the one you usually buy)	1.No	2. Yes	d/kg
9.2. Processed pork (Gio) with no borax or any chemical, no MSG	1. No	2. Yes	d/kg

### C/ For economic model

10. Compared to 10 years ago, would you say that, overall, **food safety** has:

1. improved      2. stayed about the same      3. deteriorated      4. do not know, no opinion

11. Compared to 10 years ago, would you say that, overall, **pork safety** has:

1. improved      2. stayed about the same      3. deteriorated      4. do not know, no opinion

12. "I cannot control the quality of the food that I buy" - Do you agree with this statement? (1 = Strongly agree to 5 = strongly disagree)

1	2	3	4	5
strongly agree (means I cannot control...)	tend to agree (means I cannot control...)	tend to disagree (means I can control...)	strongly disagree (means I can control)	do not know, no opinion

13. What comes to mind when thinking about possible problems or risks associated with **food**?

1	Health/illness problems	9	Cholesterol
2	Food additives (MSG, borax etc.)	10	Digestive problems
3	Chemicals (antibiotic etc.)	11	Diabetes
4	Bacteria	12	Cancer
5	Lack of quality	13	Cardiovascular problems
6	Lack of hygiene	14	Obesity/overweight
7	Food poisoning	15	Allergies
8	Malnutrition	16	Others

14. What comes to your mind when thinking about possible problems or risks associated with **pork**?

1	Health/illness problems	9	Cholesterol
2	Food additives (MSG, borax etc.)	10	Digestive problems
3	Chemicals (pesticides etc.)	11	Diabetes
4	Bacteria	12	Cancer
√5	Lack of quality	13	Cardiovascular problems
6	Lack of hygiene	14	Obesity/overweight
7	Food poisoning	15	Allergies
8	Bad quality of feed for pork	16	Others

15. For each of the following issues, please indicate your level of worry?

<b>Issues</b>	<i>Very worried</i>	<i>Fairly worried</i>	<i>Not very worried</i>	<i>Not at all worried</i>	<i>Do not know, no opinion</i>
Pesticide residues in fruit or vegetables					
New virus like avian influenza					
Residues in meat (antibiotics or hormones)					
Unhygienic production conditions					
Contamination of bacteria					
Additives such as colouring, preservatives					
Meat from diseased animals					
To put on weight					
Unhygienic conditions in food handling at home					

16. Rank your level of agreement with the following statement?

<b>Perception of intra-muscular fat/marbling</b>	<i>Strongly disagree</i>	<i>Tend to disagree</i>	<i>Tend to agree</i>	<i>Totally agree</i>	<i>No opinion</i>
(a) The more marbling, the higher the product quality					
(b) Marbling makes fresh pork products more juicy and tender					
(c) Marbling is a desirable characteristic of fresh pork product					

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<b><i>Perception of industrial feed</i></b>	<i>Strongly disagree</i>	<i>Tend to disagree</i>	<i>Tend to agree</i>	<i>Totally agree</i>	<i>No opinion</i>
(a) With industrial feed, pork meat is less fatty					
(b) With industrial feed, there are more chemical residues in pork meat					
(c) With industrial feed, pork is less tasty					

<b><i>Perception of pig breed</i></b>	<i>Strongly disagree</i>	<i>Tend to disagree</i>	<i>Tend to agree</i>	<i>Totally agree</i>	<i>No opinion</i>
(a) Pork from an exotic breed is healthier					
(b) Local pork is more tasty than exotic pork					

**D/ Household information**

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## **CASE STUDY 4. Consumers' requirements for quality rice**

CIRAD Project (F. Lançon and F. Gay, Phan Thi Giac Tam, M. Figuié).

### **Objective and methodology of the study**

The purpose of the survey was to identify the different qualities of rice consumed by the inhabitants of Ho Chi Minh City, the preparation (cooking) practices linked to these different types of rice and the determinants for consumers' selection criteria when purchasing rice.

Focus groups (three groups of 7 to 10 people) were organised with consumers to design the questionnaire. The purpose of these groups was:

- For group 1, to identify and list the types of rice (categorization used by consumers) and to list the criteria for rice selection: market attributes (price packaging), physical attributes (clean, dry etc.) organoleptic attributes (taste, smell, texture etc.), cooking quality (swelling, elongation etc.), eating quality (aroma, softness, stickiness etc.).
- For group 2, to identify and list the practices, behaviour (purchasing, cooking, mixing, storage, waste management etc.) related to the different types of rice purchased
- For group 3, to list the categories of rice sellers, the reasons and criteria for shoppers to select a particular seller

The results of the focus groups were used to design the following questionnaire

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***Annex: Questionnaire used for collecting data. Case study 4***

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## CASE STUDY 5. Trust in quality signs

Source: Mayer, J. (2006). Impacts des modes de distribution sur la perception des signes de qualité : perceptions des consommateurs de Hanoi, Vietnam. Cas des légumes des poulets et des œufs. Mémoire de master SSAA, University of Toulouse le Mirail, ERITA/CIRAD, 130 p.

Project funded by the French Ministry of Research, (Projet Action concertée incitative): "Les modes de distribution alimentaire face aux nouvelles attentes des consommateurs du Nord et du Sud"

### Objective and methodology

During the month of July 2006, about thirty semi-directive interviews were conducted in Hanoi with individuals responsible for shopping. These people were selected in such a way as to cover the diversity of purchasing practices and income. The aim of the interview was in part to analyse their perception of quality signs: label, veterinary stamp etc. – any sign intended to guarantee the sanitary quality of fresh products. It also aimed to analyse their confidence in the sanitary quality of the products sold in the different locations: street vendors and informal markets (these two categories are combined in the rest of this presentation under the title “spontaneous markets”), official markets and supermarkets.

A further survey was conducted on a sample of 507 people living in Hanoi (Hai Ba Trung, Quinh May, Cau Giay and Linh Dam districts), all of whom were involved in purchasing food for their households.

To assess the trust that consumers place in the labels and distribution methods aimed at guaranteeing the sanitary quality of foodstuffs, each interviewee was asked to express as a percentage the level of confidence they had in the sanitary quality of vegetables, chicken and eggs sold in spontaneous markets, official markets and supermarkets in the event that the product carried a quality sign and in the event that it did not. We primarily present here the answers obtained relating to vegetables and the “clean vegetables” label (similar results were obtained for both chicken and eggs. The detailed results of the survey and interviews are presented in Mayer, 2006).

### Results

#### 1. Mistrust in the markets, confidence in supermarkets

In general, consumers place little trust in the quality of vegetables marketed and this is linked in particular to production practices.

However, the people interviewed also expressed mistrust towards the inspections carried out by health officers in open-air markets:

*“In small markets, there are fewer inspections and even if checks are carried out, the inspectors don’t work very much. They are simply there but don’t intervene!”*

*“On the Hom market, once the feathers have been plucked, the product is stamped – it doesn’t inspire confidence.”*

However, in the case of supermarkets, the interviewees rely on an internal inspection system which compensates for the failings of the public inspection system:

*“There is always an inspection department in the supermarket as well as the state inspection service.”*

*“Moreover, in supermarkets there is a department with people who check the quality of the products.”*

These in-house controls, for which it is difficult to determine if they indeed exist, inspire almost total confidence and make the supermarket a place where consumers can buy with their eyes closed:

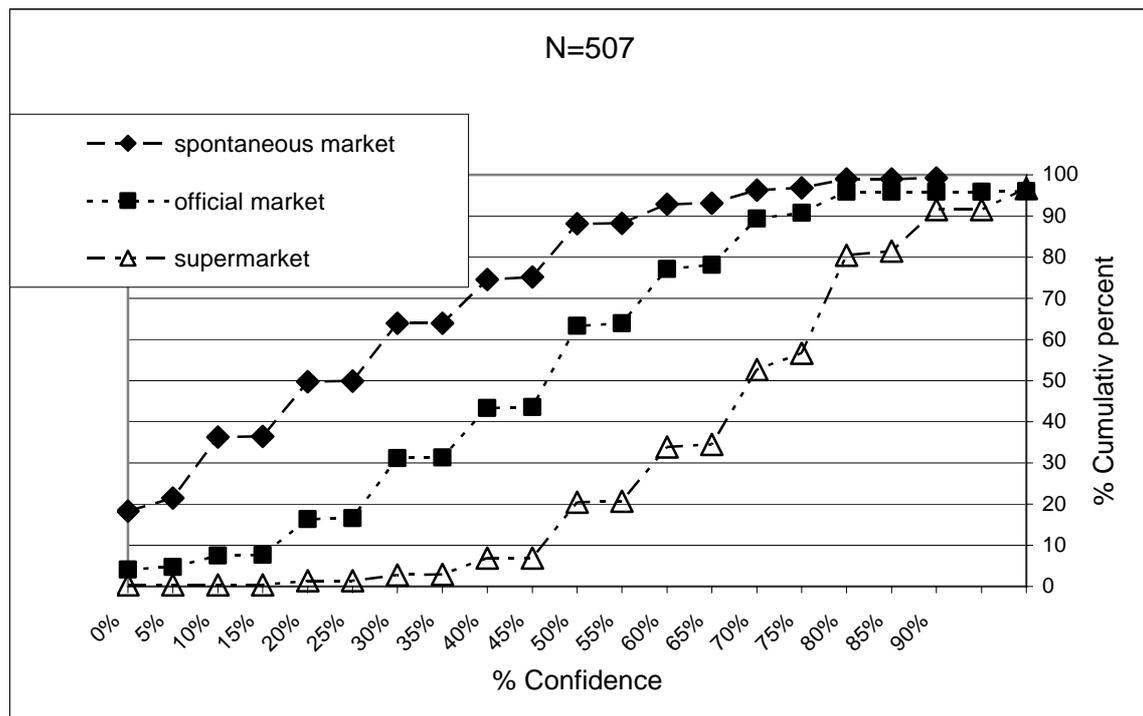
*“I buy without looking”*

*“I have every confidence in the sanitary quality”*

The results of the quantitative survey confirm this difference in confidence levels according to the point of sale. Figure 1 presents the confidence in the sanitary quality of vegetables sold without a label in three locations: spontaneous markets, official markets and supermarkets.

Only 35% of interviewees have less than 75% confidence in supermarket vegetables, although this number rises to 90% and 95% of interviewees placing this same level of confidence in spontaneous markets and official markets respectively. In the last two locations, 75% of interviewees have less than 60% confidence in vegetables on official markets and less than 40% confidence in vegetables from spontaneous markets.

**Figure 1:** Confidence in the sanitary quality of vegetables sold without a label according to the type of point of sale



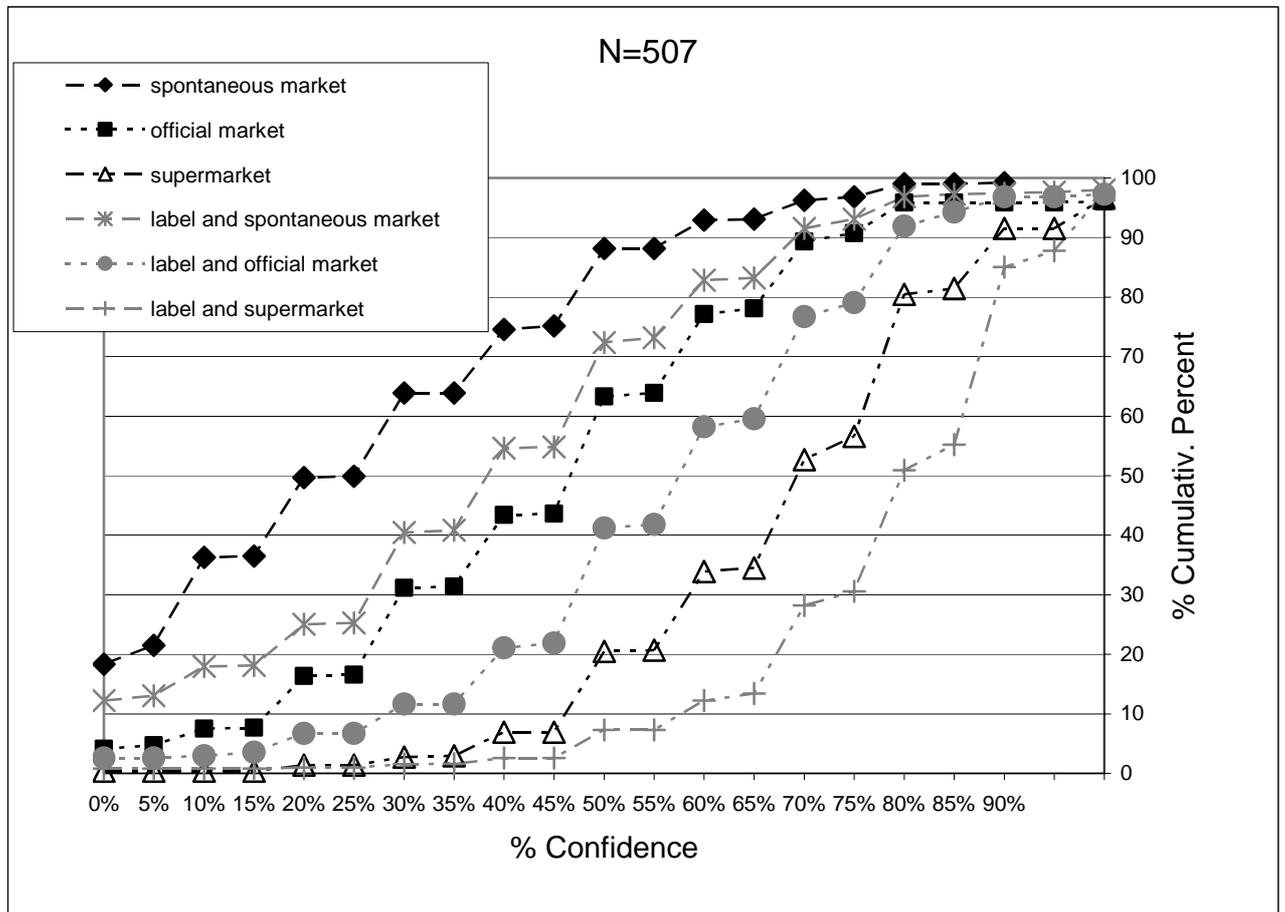
Question asked: What level of confidence, as a percentage, do you have in the sanitary quality of vegetables sold in these different locations? Answers range from “0%” = no confidence at all to “100%” = total confidence.

## 2. Confidence based more on the point of sale than on the label.

When the issue of a label is then introduced with regard to confidence (*What level of confidence, as a percentage, do you have in the sanitary quality of vegetables sold with and without a label in these different locations?*) - figure 2 – several results can be noted:

- ✓ the label increases confidence in vegetables irrespective of the location;
- ✓ confidence increases from the spontaneous market to the supermarket via the official market both for products with and without a label;
- ✓ in extreme situations – very low or very high level of confidence – the label has a smaller impact;
- ✓ with or without a label, spontaneous markets remain the location enjoying the lowest level of confidence while the supermarkets enjoy maximum confidence.

**Figure 2:** Confidence in the sanitary quality of vegetables sold with or without a “clean” label according to the type of point of sale



Compared to the distribution method, the “clean” label therefore only has a limited impact on consumer confidence in the sanitary quality of products.

Supermarkets would appear to be sufficient in themselves to inspire confidence in shoppers as even without a label, they continue to enjoy high levels of consumer confidence.

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## Discussion and conclusions

Supermarkets enjoy a high level of confidence on the part of Vietnamese consumers. This confidence is not based on the personal experience of the consumers as the level of confidence is not significantly different according to the level of frequentation. It can be noted that both consumers who shop at supermarkets and those who do not award a high confidence score to the products sold there. Nor is this confidence based on objective data known to the buyers concerning the sanitary quality of the products (no data of quality is available).

Supermarkets do not only transmit quality; they contribute to its very development. The mistrust shown towards labelled vegetables vanishes when these products are sold in supermarkets.

This study demonstrates several limitations: comparing categories of points of sale in general means comparing institutional types of confidence, i.e. relative to the technical capacity of systems. However, we know that another type of confidence exists – interpersonal confidence based on more intimate relations between sellers and buyers and in Vietnam, this type of confidence is very important in the context of transactions. If, instead of examining the spontaneous or official markets, we had studied “**your** usual market vendor”, the answers would have been very different.

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