

**Superb and Marketable Meat from Efficient and Robust Animals**  
**Markedsdrevet, højværdi økologisk kødproduktion med robuste dyr**

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Report on Expert Interviews

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## EXECUTIVE SUMMARY

This report presents the findings of a qualitative research study. The objectives of the study are to understand professional buyers' and chefs' perceptions concerning quality of meat in general and of organic meat in particular. The expert interviews were a part of WP5 of the SUMMER project.

The report starts with an introductory section, where a summary of the literature review is made on the topics of meat and industrial buying behaviour. This part of the report serves as an opening to the topic of our research. It was also useful in designing the research and in creating the interview guide.

The objectives of our research are stated in the next chapter, as well as some ideas on how the findings can be used and in which ways they bring extra knowledge to the topic.

The methodology is clearly described, explaining the interview design, the interviewee selection, interviewing method and the steps of the analysis.

The findings of qualitative studies are usually vast and difficult to summarise in few pages. In this report, the findings are presented separately for the two types of experts that were interviewed. The decision of doing this was based on the fact that chefs might have different demands and expectations than professional buyers, due to the different way they use meat. In order to make it easier to read, the findings were grouped further into three main sub-topics: information about the buying process, findings related to meat in general and findings about organic meat.

A very brief summary of all the findings is presented in the conclusions. Then, a short discussion is added at the end of the report.

## INTRODUCTION

Research has been conducted regarding consumers' perceptions of meat products. The more technical facts about the quality of meat have also been studied. In recent years, studies have been made about the differences and similarities between organic and conventional meat (Krystallis, Arvanitoyannis, & Chrysosoidis, 2006) and about the effect that organic production systems have on meat quality (Hansen, Claudi-Magnussen, Jensen, & Andersen, 2006; Olsson, Andersson, Hansson, & Lundstrom, 2003). Some of the findings of previous studies will be used as a starting point in the qualitative research. Even though the information acquired through the literature review phase is a reflection of consumer studies, not of expert opinions, it is still considered useful and it serves as inspiration and starting point for creating the interview guide.

According to the ISO definition, quality represents "the totality of features and characteristics of a product that bear on its ability to satisfy stated or implied needs". There are four categories of product characteristics in the literature of food science (Becker, 2000):

- Characteristics indicating the nutritional value: protein, fat etc.
- Characteristics indicating the processing quality: pH-value, water-binding capacity etc.
- Characteristics indicating the hygienic-toxicological quality: additives, contaminants etc.
- Characteristics indicating the sensoric quality: texture, flavour, odour, colour, appearance etc.

The natural science approach to quality is based on the objective concept of it. In contrast, the consumer behaviour approach towards food quality is based on perceived quality, where the subjectively perceived product attributes are the centre of interest (Becker, 2000). Food quality is difficult to define, because it is invariably dynamic and difficult to measure (Troy & Kerry, 2010). In 1996, Issanchou referred to the quality of food, saying that it is not an inherent characteristic, but that it is connected to the concept of acceptability, which is why it would be more correct to refer to it as perceived quality. Perception is related both to basic senses, such as visual, flavour and taste attributes, and to formed learning and experiences (Troy & Kerry, 2010). Consumer perceptions of product quality may be based on the physical characteristics of the product, on the communication around the product or on a combination of the two. Perceived quality does not depend only on the person, but also on the circumstances in which consumers interact with food. Other factors influencing perceived quality are the way the product is used, the cultural background and the education of the consumers (Issanchou, 1996).

In the purchase situation, the consumer rarely knows the exact quality of offered food products, but form expectations about quality based on available cues and the decision to buy is made based on these

expectations. Different cues to quality may be available to different consumers in different situations and they may differ in their predictive validity and power (Becker, 2000; Brunsø, Fjord, & Grunert, 2002). Quality expectations are formed on the basis of intrinsic as well as extrinsic quality cues. Intrinsic cues are attributes that are built-in to the product itself (e.g., size, colour), whereas extrinsic cues are those characteristics that can be modified without influencing the product directly (e.g., price, packaging, the type of retail outlet) (Veale & Quester, 2009).

According to the Total Food Quality Model (Grunert, Bredahl, & Brunsø, 2004), extrinsic and intrinsic cues help the formation of expected quality, which is in turn evaluated based on certain characteristics like taste, health, convenience and process. These characteristics are evaluated in a second phase, after purchase and consumption. At this point we are talking about experienced quality. Many characteristics of a food product, for example taste, cannot be ascertained before purchase, so in order to make a choice, the consumer will develop expectations about the quality, even though it is only after consumption that experienced quality can be determined. What is important to remember though is that consumers' quality perceptions depend to a large extent on the predictability and availability of quality cues (Brunso, et al., 2002).

In some respects, meat is different from other food products. It is usually more expensive and natural variations cause a lower consistency in sensory characteristics than in the case of other foods, which is why consumers may experience a lot of quality uncertainty (Issanchou, 1996). A thorough understanding of the important factors which influence quality is necessary in order to consistently produce meat of high quality. Results from focused research into meat eating quality revealed that tenderness, juiciness, flavour, overall palatability and the expected taste according to its overall appearance are the most sought after attributes by consumers (Troy & Kerry, 2010).

In recent years, consumers have attached increasing importance to attributes that have no necessary relationship to the experienced product quality. Especially the way food is produced has become an important quality dimension, even in cases when it has no immediate bearing on the taste of the product (Brunso, et al., 2002). Process characteristics do not necessarily have an impact on the properties of the final product. However, there has been increased concern about the way food products are produced, with growing interest for animal welfare and organic production. Process-related qualities of food products are almost entirely credence characteristics, because the consumer is not able to evaluate the actual production conditions. Even during cooking and consumption, the consumer cannot determine whether the food product has the promised process qualities. Due to the fact that consumers associate organic production not only with good health, animal welfare and concern for the environment, but also with good

taste, the organic characteristic is no longer only a credence characteristic, but also an experience characteristic, where expectations can be confirmed or not after consumption (Grunert, et al., 2004).

In our study we are looking at professional buyers' and chefs' perceptions regarding the quality of meat. Even though experts might share some of the same opinions as consumers do regarding this matter, one must keep in mind that not only attitudes are important, but also actual behaviours. Considering this, we have to remember that the buying behaviour and the buying process are different in the case of organizations and thus they need to be analysed differently. Understanding the industrial buying behaviour is important, because this can have a significant influence on the actual purchases and the buyer-supplier relationship.

The knowledge gained in consumer buying behaviour is not very relevant when we are talking about organizational buying behaviour, because there are some major differences between the two. "Industrial buying takes place in the context of a formal organization influenced by budget, cost and profit considerations, and it usually involves many people in the decision process, with complex interactions among people and among individual and organizational goals." (Webster & Wind, 1972) It is a process that involves multiple goals and potentially conflicting decision criteria. Webster and Wind developed a model of organizational buying behaviour, in which one can clearly see the complexity of the industrial buying process. According to the model, there are four variables determining the organizational buying behaviour: environmental, organizational, social and individual (Webster & Wind, 1972). Kennedy wrote that participants in the buying process are influenced by factors such as: the organisational influences, the environmental conditions, the influences of product-related factors and the stage in the purchasing process (Kennedy, 1982).

Buyer-seller interaction has been seen as an important determinant of supplier selection over the past few decades. Since the '70s it has been understood that the relationships that are developed with the suppliers are highly valued by industrial buyers. Buyers no longer consider suppliers to be just sellers, but rather see them as partners, because only through a partnership can purchasers accomplish their objectives, produce goods with the best quality standards and provide customer satisfaction (Dzever, Merdji, & Saives, 2001). Shifting the perspective to a partnership orientation is crucial for gaining competitive advantage (Zaheer, McEvily, & Perrone, 1998). It has long been recognized by business academics that suppliers have a major influence on an organization's competitiveness and efficiency, especially because companies are a part of a bigger external environment (Hald, Córdón, & Vollmann, 2009). Adopting a relational perspective instead of a transactional one helps sellers and buyers create superior value, which can be beneficial for both parts (Leonidou, 2004).

Inter-organizational trust also has a strong influence on supplier performance and it is determined by factors such as past experiences, the institutionalized practices and the routines that collaborations are based on (Zaheer, et al., 1998). The expectations that the buyers have about suppliers are also important. Expectations refer to the perceived potential of suppliers to satisfy explicit and implicit objectives. Past purchases and information sources are likely to influence expectations (Sheth, 1973). Studies have shown that there is greater dependence, greater trust, lower uncertainty and lower distance in unchanged, routine buying processes. The more similar a buying situation is to another, the higher the level of communication, cooperation, adaptation and commitment between business partners (Leonidou, 2004).

## **OBJECTIVES**

The aim of this qualitative research study is to understand professional buyers' and chefs':

- perceptions concerning quality of meat in general;
- perceptions regarding organic meat;
- wishes and ideas regarding improved quality of organic meat.

In other words, we are interested in knowing how the quality of meat is assessed by chefs and professional buyers, both in general terms and in the case of organic meat in particular. Using this framework, the interviewees are asked to make a comparison between conventional and organic meat and, if possible, to come up with ideas about what organic meat should ideally be like.

It is also possible to compare the findings of the expert interviews with consumers' opinions on meat quality, due to the fact that the interview guide was created in accordance with the guides used in the focus group discussions with consumers. Thus, the analysis of the interviews allows us to gather ideas and get a picture of the realities that exist in industrial buying situations on one hand, and on the other hand it allows us to compare the viewpoints of experts and consumers and to see if there is a divergence or a convergence of ideas, preferences and expectations.

There is a vast literature studying what consumers understand by food quality, but there are no studies revealing what experts consider as cues to quality. It may very well be that the perceptions are the same for both consumers and experts. It might also be that chefs and buyers know the needs and preferences of their clients and thus try to satisfy their customers, without forgetting their own objectives. This report represents a first step of the analysis, where experts' opinions are investigated in their own right, while the results of the consumer studies were presented in two separate master theses.

## METHODOLOGY

The qualitative research method of interviewing was chosen in order to investigate professional buyers' and chefs' perceptions of meat quality. This chapter will describe the chosen research method.

### Interviews – a qualitative research method

Due to the fact that it is difficult to give a definition of qualitative research, text books usually present a comparison between quantitative and qualitative research, because this is an easier way to understand what qualitative research is about. The general idea is that “the word *qualitative* implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured in terms of quantity, amount, intensity or frequency. Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. They seek answers to questions that stress *how* social experience is created and given meaning.” (Denzin & Lincoln, 2005) Thus, qualitative research deals with holistic understandings and interpretations of the issues that are studied (Eriksson & Kovalainen, 2008). There are many methods that a researcher can use when conducting qualitative research: focus groups, interviews, case studies, ethnographic studies, action research, narrative research etc.

Interview data is one of the major sources of information for qualitative researchers. Whatever an interview's form, its purpose is to get inside the “respondents' head” and enter into their perspective to find out things like feelings, memories and interpretations that cannot be observed or discovered in other ways (Carson, Gilmore, Perry, & Gronhaug, 2005). In-depth interviews vary in form. To one extreme there are the un-structured interviews, where there is no structure or direction established by the interviewer, the main goal being the exploration of the internal reality of the respondent. Such types of interviews will generally have the form of a free discussion between interviewer and interviewee. At the other extreme there are the structured interviews, where the course of the discussion is firmly coordinated by the interviewer and the topics that are to be discussed are clearly defined beforehand. The in-between option, semi-structured interviews, is the one used for this research. In this case, there is a certain structure followed during the discussions, but there is also a certain freedom of speech and of choice of topics that can be discussed in more depth than planned.

### Interview design

As mentioned before, personal interviews were used in order to gain information from experts. This method was considered to be the most appropriate for reaching the study's objectives. Another important aspect is that, when dealing with retailers and chefs that have very busy schedules, it is a good idea to use



personal interviews, so that you can coordinate with the respondents and plan meetings according to their time schedule.

The interviews were semi-structured and the discussions were conducted based on an interview guide (see Appendix). The interviewees had the freedom of talking about other aspects that they found to be important and that were not included in the interview guide. Also, whenever there was a need for more clarifications, the discussion would go beyond the interview guide. However, the interviews were not unstructured, because using an interview guide helps the interviewer keep track of what is being discussed and it also helps to get the discussion back on track in case it goes too far off topic. Another reason for using an interview guide was the fact that it was important to talk to all respondents about the same topics, because that would help with the analysis and thus it would help get a more consistent picture of the experts' opinions. The interview guide was created based on a preliminary guide created by researchers at Foulum Research Center. Basically, it was important that the information received from the experts would be valuable and could be "translated" into actual product characteristics. Similar topics were chosen for the focus group discussions conducted with consumers.

The interview guide consisted of three main sections (see Appendix). The first part was made of questions regarding the respondents' experience and their job responsibilities, especially the ones dealing with meat in one way or another. The second section contained questions about meat quality in general and the third part contained questions about organic meat. The second and third part contained the same questions, the only difference being the focus of the topic. At the end of the discussion, respondents were asked to compare conventional meat to organic meat and to make suggestions regarding the ideal organic meat product. Most of the questions were used both in the discussions with retailers and with chefs. There were very few questions that were used only for one category. For example, it was assumed that retailers have a more clear idea of what organic meat is, because of all the specifications they deal with in their job, but on the other hand it was assumed that chefs might have a more subjective interpretation of what organic meat represents. For this reason, only chefs were asked about their understanding of organic meat, whereas professional buyers were not asked this question.

The interview guide also contained specific questions about opinions regarding the age of the animal, slaughtering techniques, breed, crossbreeding, grazing and castration, because this information was considered to be useful for meat producers. Moreover, we were also interested in knowing something about the buyer-supplier relationship and what might influence the experts' organizational buying behaviour. However, meat quality was the central topic of discussion, and some of the main questions were:

- What aspects do you take into consideration when judging if organic meat is of high quality?

- What are the important risks threatening organic meat quality?
- Do you assess that the quality of organic meat today is better or worse than conventional meat?
- What do you think are the most important qualities that your customers look for when buying organic meat?
- What would the ideal organic meat product be for you?

## Conducting the interviews

The interviews were conducted in September-October 2011. Each interview lasted approximately 40 minutes, with duration varying between 30 and 50 minutes. The interviewees were 6 professional buyers and 5 chefs. The timing of each interview was agreed upon with the respondent and the venue of the interviews was the working place of each interviewee. The interviewer and the respondent were the only two people participating in the discussion. The conversations were in English and each interview was recorded with the participant's permission.

Each interview was planned a few days before it was conducted. The professional buyers were contacted via telephone, whereas the chefs were contacted in person, in a preliminary meeting. When the respondents were contacted and asked for permission to participate in the study, they were not informed of the fact that organic meat is the main interest of the research. They were informed that we were interested in knowing their opinion regarding meat and the quality of meat, with the aim of using their opinions for new product development. The organic aspect was not brought up at this stage because we didn't want to bias their answers in any way, so we hoped that by not knowing that we were actually interested in organic meat they would give us more honest and spontaneous answers on the topic. However, all the interviewees were debriefed when the interviews were finished and they were informed about our interest in organic meat. Plus, the ones who needed more clarifications were given more information about the SUMMER project.

As it can be seen in the interview guide, the first part of the interview was dedicated to opening questions that would help the interviewees be more relaxed and opened up to the discussion. In this regard they were asked to make a brief presentation of themselves by talking about their job responsibilities, their experience and the buying process they go through when they purchase meat. The questions would then go into the main topics, getting more and more specific along the way. In some cases not all the questions that were in the interview guide were asked. At the end of the interview the participants were asked to add any desired extra comments. The interviews were wrapped-up by thanking the interviewees for contributing to our research.

## Interviewees

The interviewees that were chosen to participate in this study were screened based on certain criteria. First of all, they would need to work with meat or meat products. They would need to work in the retailing industry or be chefs. Considering the fact that our main interest was the topic of organic meat, we tried to find participants that would be dealing with organic meat. However, the opinions of the respondents who don't buy or don't use organic meat are still important for creating the picture of meat quality in general.

In Denmark, most of the supermarkets get their products supplied through big retail companies. Taking this into consideration, the options regarding the professional buyers that one could use in this case were somewhat limited. In the end, our respondents were professional buyers working at Coop, Dansk Supermarked and SuperGros. One butcher/owner of a butcher store was also interviewed, because it was considered that a butcher's opinions would be somewhat different from the ones of a retailer, but no less valuable.

The options were less limited when searching for chefs who might participate in the study. Given the fact that organic meat is more expensive than conventional meat, one would assume that it is not used as an ingredient in restaurants where food is cheap. On the other hand, one would expect that gourmet restaurants are more inclined to use organic meat, because their customers would be more willing to pay for an expensive dish. In the end, the chefs that were interviewed worked in the following types of restaurants:

- 2 chefs from restaurants that are organic-oriented, where most of the meat that is used is organic;
- 2 chefs from gourmet restaurants, where organic meat is sometimes used as an ingredient, but not all the time;
- 1 chef from a gourmet restaurant, where organic meat is never used as an ingredient.

## Steps of the analysis

The interviews were analysed using coding and content analysis. The steps of the analysis were:

- Recording each interview.
- Transcribing each interview, without considering the non-verbal communication.
- Coding the transcriptions, mainly based on the interview guide, using NVivo 9 software. Coding is a method that is frequently used in qualitative research, because it helps the researcher to structure all the information and to handle it easier.
- Analysing the main themes.
- Presenting the results separately for professional buyers and chefs.

## FINDINGS

### PROFESSIONAL BUYERS

#### Buying process

In retail companies, the meat purchasing responsibilities are usually divided between more people or more sub-departments that are in charge of managing different categories. For example, it will be likely that the different fresh meat types are split between buyers (e.g. one buyer buys poultry, one buys beef, pork and veal etc.). Also, buying responsibilities might be split depending on where the meat is brought from (imported or locally produced), if it is fresh meat or frozen meat, if it is sold on to supermarkets or discount stores etc. Butchers however have less quantity to deal with, so they are usually responsible for buying all types of meat.

Meat is usually bought 6-7 times per week. In case the meat is imported from other countries, than the frequency is different, meaning that it most likely would be bought on a weekly basis. Because of the fact that the amounts of meat that are bought are quite big, it was difficult to estimate the quantity that is traded by retailers. One of the retailers mentioned that he is buying approximately 900 million kroner worth of meat per year.

A lot of meat is bought in Denmark, but also from other countries, like Germany, Argentina, USA etc. Regarding the meat suppliers, it seems that most retailers like to work with big meat producers. When it comes to organic meat, Friland is one of the most used suppliers, but also Rose Poultry and Gråsten for poultry products. The interviewees were asked to mention some choice criteria that they use when selecting meat suppliers or to describe their buyer-supplier relationship. Retailers usually have a list of specifications regarding the meat they want to buy and the suppliers need to be able to meet their demand in order to provide good quality. Most of the professional buyers would visit their suppliers and check out their facilities, to see if they comply with regulations and whatever extra specifications they might have. Meat contamination can be a big issue, so it is important that producers are strict in that matter. Long-term relationships are important and having the certainty that the demand will be met for. This is one of the main reasons why big producers are preferred, because small producers are not able to provide such big quantities in order to keep supply running smoothly. The price the retailers have to pay is also important, as well as the service they get from the suppliers.

The meat that the retailers buy is then distributed to supermarkets and discount stores. However, it is not the same products that go everywhere. There are differences in the meat assortment between supermarkets and discount stores, both in conventional and in organic meat. Minced meat is probably the most sold meat product and it can be found in all the different stores. In discount stores one can find fewer

types of cuts, whereas in a big supermarket you might find up to ten times more different cuts. Meat is generally of higher quality in supermarkets than in discount stores and the assortment is wider. Moreover, some supermarkets have their own butchers. All in all, the division of meat products in the stores is mainly determined by the target consumers. There might be some differences between Jutland and the Copenhagen area or between the stores that are in big cities and the ones that are in smaller towns, but not major ones.

### **Meat quality**

When the professional buyers were asked to mention the factors that they think make meat a high quality product, a considerable number of attributes were mentioned: origin, colour, tenderness, appearance, breed, what the animals were fed with and their life quality, the age of the animal, the shape of the cut, the slaughtering methods, local production, the packaging and the shelf life.

*“The breed of cattle is one of the most important factors. Also, the origin, the country that it comes from, because that indicates how good the slaughtering process has been hygiene-wise.”*

*“The way it looks. Is it good or does it have a lot of blood stains? Has it been cut well?”*

*“The taste and the tenderness are the most important.”*

*“You have to know the raw material, otherwise you don’t know what you are buying. If you are buying a piece of meat in a vacuumed pack, it could be anything, but you have to know where the meat comes from, where it has been slaughtered, the fat cover, the colour, the age.”*

The risks that can affect meat quality are stress of the animal, the temperature of the environment where the meat is kept, bacteria contamination, the age of the animal and the use of bad handling methods.

*“When they are travelling with meat from a long distance the freshness is not as good as it is from here in Denmark.”*

*“If it’s not handled well in the slaughtering process, for example. If the animals are stressed out, that can make meat less tender. If it is not handled well during slaughter then it gets bacteria on it and all that influences the shelf-life of the product.”*

*“If [the animals] don’t have the right feed and if they don’t have the right breed.”*

*“The temperature of the transportation. If it’s too warm then you break the entire cooling chain and the shelf life will be short.”*

*“You can have let’s say a 5-6 years old milking cow, you’re never going to get tasty and tender meat out of that. If you’re using it for minced meat, then it’s ok, but not for steaks.”*

Some of the questions in the interview guide were about more specific aspects, like breed, grazing, age, cross breeding and castration, and how they might influence the quality of meat. An outline of the answers is:

**Danish/Nordic breed:** respondents said that it is not important for them that the animals are of Danish/Nordic breed.

**Slaughtering demands:** slaughtering methods should adhere to the standards and to the law. The animal needs to be unconscious when it is being slaughtered and the procedure has to be humane. The Muslim way of slaughtering stresses out the animal.

**Crossbreeding:** it might be able to give better meat quality, depending on which breeds are crossed. One respondent thinks that it could influence the quality, but that you need to really be in the business to taste the difference in the end product.

**Grazing:** only one respondent has specifications saying that they prefer grass-fed animals, due to the flavour, the amount of fat and environmental reasons. The other respondents don't have specifications regarding this. The opinions were that grazing can change the colour of the meat, that meat can taste differently, but overall that it does not have such a big influence on the end product.

**Castration:** Most of the respondents agree that hormones in the non-castrated animal have a negative impact on the quality of meat, especially on its taste.

**Age at slaughtering:** it can affect the colour of the meat, the size of the muscles and the taste. The age of the animal is generally important. Old chickens are difficult to cook, old pigs taste more like pigs than younger ones and old cows don't give such good meat.

The interviewees also spoke about what they think are the most important qualities for their customers when they buy meat in their stores. The most common idea was that the customers are price sensitive on the one hand and on the other hand that they expect the meat to be tender. Besides these two aspects, other things were also mentioned, like freshness, colour, fat marbling and the way the meat is packed.

### **Organic meat**

The reasons why retailers buy organic meat for supermarkets are:

- In order to create an image for the company.
- Because some customers ask for it.
- To satisfy the needs of as many customers as possible and to deliver what they want.
- Because customers can have a good meal and a good consciousness when they eat organic meat.
- Supplying a lot of minced meat, because it is widely sold in Denmark.

When asked to describe the quality of organic meat, the interviewees thought badly about it. Some of them mentioned the “old milking cow” issue, which refers to the fact that most of the cows that are raised in Denmark are used for giving milk, which stops them from being good at giving good meat. They mentioned a few risks or things that can go wrong with the production of organic meat: higher risk of bacterial contamination, farmers not respecting the rules and not being able to produce big enough volumes. Another issue that some of them pointed out was the inability to taste the difference between organic and conventional meat.

*“[I would describe it as being] Lousy. The whole organic setup is made on doing organic milk. (...) If you have that old cow that has been giving meat and you slaughter that, you are not getting tender beef out of that.”*

*“We make tests on different organic, free-range and traditional. And you seem to have more tenderness in the conventional than in organic. And if you mature the free-ranged, you actually get a better product. But if you mature organic, it still doesn’t get as tender.”*

*“I think that the quality is less than the quality of conventional meat. When we’re having blind testes, organic meat always gets the lowest points.”*

*“It’s not higher quality than normal meat. I think that it’s one of the problems that customers are expecting a higher quality when they are buying organic meat, but they are not.”*

*“Denmark is not prepared for organic beef production because of our climate.”*

Retailers think that consumers buy organic meat because they think that it is better and they expect more from it, because they might think that it’s healthier, because they are interested in how the meat is produced and they want to go a good deed, by being animal and environmentally-friendly.

Professional buyers did not come up with a lot of ideas about an organic meat product; their answers were very short on this matter. Their opinion was that it would have to be tenderer, juicier, cheaper, that it should come from animals that have enough living space and that it would be ideal if grazing would be possible all year round.

## CHEFS

### Buying process

In restaurants, chefs are the ones who decide what ingredients need to be bought. Most of the restaurants change their menus every month, which means that some of the ingredients are constantly changing. Sometimes the menu changes according to the availability of meat (especially in the case of game meat, like deer, moose etc.), but that is something that happens in few restaurants. Chefs use all types of meat and cuts in their kitchens, but not all at the same time, taking into consideration the rotation of dishes throughout a longer period of time. The average frequency for buying meat is 3 times/week. The quantity that is bought differs from a period of time to another, because it depends not only on the food they serve in the restaurant, but also on the dishes they prepare for private parties, where bigger quantities of food are cooked.

Meat is generally bought from big suppliers, caterers or wholesalers. Some of the companies that were mentioned were Sødram, Danish Crown, AB Catering, Gråsten and Ingo. Organic meat is bought from small, as well as big producers, who can supply organic meat if the chefs ask for it. The problem with the small producers is that they cannot meet their demand all the time, because they don't have mass production systems, so it is difficult to produce the quantity that is needed, especially when big quantities of meat are requested. Some of the aspects that were mentioned as being important when selecting meat suppliers were quality, service, good relationship, quality-price ratio and good treatment of the animals.

### Meat quality

The chefs consider the following aspects when judging the quality of meat: taste, colour, tenderness, smell, fat, organic production, texture, firmness, moisture, appearance, packaging and the quality of the animal's life.

*"It depends on what kind of meat it is. (...) If we're talking about beef, like for example tenderloin, if I cut it through I like to see that it has a nice fat texture, also for fillets, if you cut it, it needs to have that marbled fat."*

*"That when you cook it, you can chew it nicely, that you don't have any problems chewing it. If the animal has been hanged as long as it's supposed to."*

*"It depends on what kind of meat. Some meat you want to be soft, some you don't. Of course, the classic [cues] are the look, the smell, the content of fat and again there's a variation in different parts of the meat. In some parts you expect more fat, in some you don't. (...) Then of course are there visible markings, like blood stains. When we prepare the meat, we look at how much it reduces while preparing. (...) Then the taste and the texture of the meat. It has to smell good, feel nice and be packed nicely."*



The risks affecting meat quality can be the cooling process, the feed, stress, bacteria, water content, the way it is cooked, the way it is hanged, visible markings, the origin, mass production, quality of life and the age of the animal when it is slaughtered.

*“If you take meat from the cow that’s giving milk, that’s not good.”*

*“It’s not so nice to have a big fat chicken and it’s only 15 days old, it doesn’t have the same taste.”*

*“If you produce a lot of food, if the animal is not treated well, if it’s not produced with a good consciousness.”*

*“Cooking can damage the meat. If it hasn’t been hanged for quite some time as well.”*

*“Are there visible markings, like blood stains, has the animal been hit, or if it is wild game has it tumbled and ran into a tree and you can see a sign of injury, that’s not good.”*

The chefs were also asked about specific aspects and how they might affect the quality of meat.

Cross breeding: The chefs didn’t know much about cross breeding, however some of their thoughts were that it can make the animal better, but it’s something you do mostly with milking cows, not the cows you grow for meat. It can be very good when you want to enhance a certain quality

Castration: The chefs were not sure or did not know exactly how castration influences the quality of the meat, although they were guessing that hormones should affect the taste of meat in some way. Only one of the chefs was sure about the negative effect of hormones.

Grazing: Chefs agreed that it has a positive influence on the taste and overall quality of meat.

Breed: There are some classic breeds that chefs usually use. But they usually do not have requests of specific breeds, if the quality is good. The difference between milking cows and meat cows is emphasized. The breed might not matter for minced meat, but it matters when you need the meat on the plate. Sometimes you can see the difference in colour and size between races.

Age at slaughtering: The meat gets tougher, the older the animal is. If it’s too old, the meat will not be good. As young as you can get the animal to be, the tenderer the meat is. Meat from an old cow can be used for flavourful minced meat. The stronger the animals get, the more they use their muscles and the more time it takes to cook the meat. So of course, the younger the animals, the less tight the muscles are and the finer the texture of the meat.

Danish/Nordic breed: It is not important for the chefs that the meat is from an animal that has a Danish/Nordic breed. Breed is not important as long as the quality is good and the meat tastes good. Two chefs mentioned that they like using breeds that are not Danish, but that are also grown in Denmark. One chef mentioned that there are only Danish breeds for milking cows, not for meat cows.

Regional production: For some chefs it is very important that the meat is from Denmark. Buying meat from other countries implies transportation, which has a bad influence on the environment. The quality and price of meat are important when choosing the place they buy it from.

The chefs were asked to reflect on what their clients might consider to be the most important qualities they look for when they eat meat dishes in their restaurants. The most common ones were taste, tenderness, appearance and flavour. One of the chefs had an interesting opinion regarding the importance of tenderness in meat: *“That’s a funny thing, because everybody says that meat needs to be tender. If you ask Danish customers, tenderness is the one thing they go for, like equals quality, and it’s so funny, because tenderness is not equals quality.”*

### Organic meat

The chefs were asked to say what they understand by organic meat. An overall picture of all the answers would be that organic meat comes from animals which were grown in proper circumstances, with enough space to walk freely and fed with pure food that had no added GMOs or medicine, that are not from far away (referring to the distance to the production place) and that grow slowly (a slower growth is considered to give more and better meat). In conclusion, we can say that the main concerns are animal welfare and protection of the environment.

The reasons why chefs use organic meat in their restaurants are:

- Because of the restaurant’s philosophy.
- Because it’s the only right way to do it.
- Because the meat is better.
- Because the animals have a better life.
- Because it’s a good thing to put on the menu.
- Because of the desire to promote the idea behind organic.

The chef that doesn’t buy organic meat mentioned its high price as the reason, saying that it is not affordable.

*“I don’t think conventional meat is better. Probably if you take the best organic meat, it’s probably healthier and probably better than conventional meat, but it’s not payable and it’s not suited for restaurant use, because it’s too expensive. I can’t buy organic meat if it’s not as good as another type of meat that I can buy even cheaper.”*

Chefs take into consideration the same cues and risks in order to evaluate the quality of conventional and organic meat. Chefs say that some pieces of organic meat taste better and are bigger than conventional ones and they point out that organic meat is mainly better because of animal welfare. Chefs agree that the overall quality of organic meat is better than the quality of conventional meat. However,

they also agree that one can have very good quality meat that is not organic. It is important to notice that chefs will not compromise quality over the organic claim, meaning that they will not choose a piece of bad quality meat just because it is organic and that they will go for where the best quality is.

*“The quality in organic is better. What I like is the philosophy behind it, that you think about the animals, that they have a good life. (...) But, if people are not producing it right, then organic meat will not be better than conventional meat. I would never choose organic over conventional just because it’s organic.”*

*“If some farmer has cows and takes good care of them and they’re going on the field all day, it can be very good quality-wise without it being organic.”*

*“For some organic is like a religion, everything needs to be organic. No, you need to go after the best products. And if those products aren’t organic, then don’t use them. There are products that I can get that are much better than organic. If you want to buy something, find out who’s behind it. It’s the product’s quality that decides, not the label of it.”*

Chefs think that their customers choose organic meat dishes because they get an idea that it is a better piece of meat or because they are interested in animal welfare and they like the philosophy behind it.

According to the chefs, the ideal organic meat product has to be of top quality, has to taste very good, has to be as expected when it is cooked, should come from an animal that has as close as a natural life as possible, has had a good life and has been organically grown, needs as little transportation as possible to the slaughter place and it would be nice if it were cheaper, with a price similar to conventional meat or a little bit higher.

## CONCLUSION

The key findings of this study are:

- **Quality cues:** related to the meat - colour, tenderness, appearance, fat content, fat marbling, smell, texture, firmness, taste; related to the animals - origin, age, breed, feed.
- **Risks affecting quality:** stress, transportation, bacteria, breed, cooling cycle, age, wrong handling, feed, water content, hanging, cooking.
- **What defines organic meat:** animals grown in proper circumstances, fed with pure food, no GMO, no medicine, slower growth rates, produced somewhere close distance-wise.
- **Organic meat vs. conventional meat:** The opinions are mixed when it comes to comparing the two types of meat. In the case of professional buyers, many say that the quality of organic is not better, that you cannot taste the difference between the two categories, or that in blind tests conventional meat wins over organic. Chefs say that conventional meat can be very good quality-wise and organic meat is better regarding animal welfare. In general, chefs think that organic meat is probably better than conventional meat.
- **Risks affecting the quality of organic meat:** producers not respecting regulations, higher risk of bacteria contamination, small production, slaughtering organic cows used for giving milk.
- **The ideal organic meat product:** should be tenderer and juicier, should come from animals that have more living space and that go outside as much as they can, should be possible to be delivered more often and at a lower price, should taste good and it should not be transported for too long.

## DISCUSSION

The aim of this study was to determine how professional buyers and chefs evaluate the quality of meat. Even though our main focus was the topic of organic meat, we nevertheless considered that it would be important to know their opinions about meat in general. One would expect the demands and expectations to be the same for organic meat as for conventional meat. On the other hand, because of the fact that organic meat is, in some respects, different from conventional meat, it would be expected for one to have some extra demands when determining its quality, mainly because of the way it is produced and, of course, because of its higher price.

The qualitative research study has given us access to a lot of new and interesting ideas that were not mentioned in other studies. Some of the things that the respondents mentioned can even be considered surprising, like the “old milking cow” issue or the idea that Denmark is not prepared for proper organic meat production. The vast amount of information that was gathered can serve as a solid basis for future research on this topic, both for surveys and experiments.

The opinions of chefs and professional buyers are mostly similar to each other. Some of them might be different, but that can also happen because of the nature of their jobs. Chefs are of course very interested in the eating and cooking qualities of meat, because they work with it and have a closer contact with the products than professional buyers do. Retailers work with trading industrial amounts of meat, so the acquisition process is very important, as well as providing what, when and how much is needed on the market.

A lot of the findings represent good knowledge for new product development. The way the animals are raised and then handled during slaughter have a big influence on the quality of meat. Of course, some of the aspects that were mentioned are beyond the responsibilities of the actual producers, which suggests that efforts to improve the total quality of meat products need to be made along the entire supply chain.

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## APPENDIX

### Interview guide

1. Respondent's background:

- Educational background; Work experience
- Current job description; Meat purchasing responsibilities
- Quantity of meat bought and frequency of buying meat
- Meat suppliers and the choice criteria used for selecting them
- *Professional buyers*: meat products bought and sold; division of meat products in the stores; differences in the meat assortment
- *Chefs*: meat types and meat products used for cooking; meat dishes served

2. General information about quality of meat

- What aspects do you take into consideration when judging if meat is of high quality? / What are the cues or indicators that you believe are a sign of high-quality of meat?
- What are the important risks threatening meat quality?
- Are the qualities you look for in the meat you purchase the same for, for example, pork, beef and poultry? If not, what are the differences? The risks or threats?
- What do you think are the most important qualities that your customers look for when buying meat in your stores/ meat dishes in your restaurant?
- How important is local or regional production for you?
- Does it matter if the animals are of Danish/Nordic breed?
- What are your demands regarding the methods used for slaughtering? Should organic slaughter be different than conventional slaughtering?
- Does the age of the animal at the time of slaughtering have any importance for you?
- Do the following aspects affect the quality of meat: breed/race of cattle, crossbreeding, grazing, castration?

3. Elaboration on organic meat

- Are you responsible for buying organic meat?
- Who are your organic meat suppliers? What are the choice criteria you use when selecting organic meat suppliers?



- *Chefs: What do you understand by organic meat?*
- For what reason do you or don't you sell organic meat/use organic meat in your restaurant?
- *Professional buyers: Do you sell organic meat products in all your stores?*
- What aspects do you take into consideration when judging if organic meat is of high quality?
- What are the important risks threatening organic meat quality?
- Are the qualities you look for in the organic meat you purchase the same for pork, beef and poultry?
- Do you assess that the quality of organic meat today is better or worse than conventional meat?
- What are some aspects where you judge that organic meat is better than conventional meat?
- What are some aspects where you judge that conventional meat is better than organic meat?
- What do you think are the most important qualities that your customers look for when buying organic meat in your stores/ organic meat dishes in your restaurant?
- What would the ideal organic meat product be for you?