

What is quality of pork? Results of a qualitative study

Lone Bredahl* and Marchen Andersson**, * MAPP, The Aarhus School of Business, ** Danish Meat Research Institute, Denmark

Background

Consumers' purchase decisions with regard to food are considerably more complex than purchase decisions with regard to other products, one being that the quality of food products cannot be directly ascertained at the point of purchase, but only later when the product has been prepared and consumed. In a purchase situation the consumer therefore employs various quality cues to form an expectation of the product quality, which can then be confirmed or disconfirmed upon consumption. The quality cues used can be both visible product characteristics such as colour or share of fat and characteristics which are not a direct part of the physical product such as branding, packaging or sales outlet. These characteristics are commonly referred to as intrinsic and extrinsic quality cues, respectively (Olson & Jacoby, 1972).

Consumers' evaluation of meat quality is particularly intricate as meat is largely sold unbranded and because the objectively measurable quality of meat varies considerably more than the quality of many other food products. With meat, the visual appearance of the product is therefore particularly crucial to consumer liking and, eventually, purchase.

Research has shown that consumers experience considerable uncertainty in evaluating the quality of meat at the time of purchase in such a way that the evaluation can actually predict the quality that the consumers will experience upon consuming the meat (Steenkamp & van Trijp, 1996; Grunert, 1997). In addition, it has been shown that consumers' perception of meat quality is only weakly related to objective product characteristics (Bredahl, Grunert & Fertin, in press). This suggests that producers and marketers of meat face significant problems in developing meat which will both appeal to consumers at the sales counter and which will also fulfil the consumer's expectations when it is prepared and consumed. Therefore more research on the constituents of consumers' perception of meat quality is warranted particularly with regard to the usage of intrinsic quality cues.

Objectives

The main objectives of the present study is to gain insight into 1) which intrinsic quality cues consumers employ to assess the quality of pork, 2) which aspects consumers associate with high quality of pork, and 3) how consumers' quality perception relates to objective product quality.

Method

The objectives were achieved by applying a qualitative methodology as follows:

A focus group discussion was conducted with ten German consumers, using real pork chops as stimuli. All participants were women who had the primary responsibility for shopping for food and cooking in their own household, and they all lived in the Hamburg area. The women prepared and consumed pork at least once a week, including pork chops.

Stimuli

Pork chops from two different suppliers were used. The pork chops were cut from the neck and hip ends of seven boneless loins, resulting in 14 different meat samples (two sets were made). The pork chops were presented to the women on separate plates that were labelled from A to N. No further information was given.

Execution

The focus group started with a general discussion of criteria that the women thought influenced their choice of meat in a purchase situation. After this the women were shown the first set of samples and asked to evaluate and, jointly, rank the 14 pork chops according to their expected quality. Upon renewed general discussion, the women were given fried tastings of the second set of pork chops, sliced into bite-size pieces. The women were asked to taste as many samples as they felt like, evaluate the quality of the meat, and, finally, rank the meat, again jointly, according to experienced quality. Objective, technical measurements of the physical characteristics of the pork were carried out parallel with the focus group. The data were collected in June 1997.

Results and discussion*Intrinsic quality cues*

In the general discussion and at the evaluation of the exhibited pork chops, the following intrinsic quality indicators were mentioned as indicators of good quality of pork (unprioritized listing):

- low share of fat both with regard to fat edge and fat marbling
- regular and meshed fat marbling
- milky or light pink-coloured fat edge (versus grey, brownish or yellowish colour)
- absence of blood both in fat and meat
- uniform pink or dark pink meat (versus white-grey, red-brownish, yellowish or pale colour)
- firm texture (versus loose, stringy or mushy texture)
- slightly moist appearance, but not soaking in meat juice
- lack of dry edges
- regular shape and thickness

Thus, the quality of the pork was to a large degree estimated from perceptions of the fat of the meat. The women looked at both the



texture and colour of the fat and the overall share of fat, and generally they preferred as little fat as possible. A few elderly – and thus more experienced – women thought, however, that some degree of fat marbling would generally improve the juiciness and the tenderness of pork, and using the same argument a few women also preferred pork chops with some fat edge which can be cut off after frying.

In addition, it turned out that the women employ quality cues which are not immediately accessible in the purchase situation to assess the quality of pork. Thus, how the meat 'behaves' during meal preparation and cooking also contributes to the expected quality of the meat. It was mentioned that the meat should not appear stringy if it was cut before frying, for instance to remove superfluous fat, and it was important that the meat does not shrink or reek of pig during frying.

Aspects of pork quality

The women associated the quality of pork both with the healthiness and the mere eating quality of the meat. According to the women, good eating quality comprises a high degree of leanness, juiciness, freshness and tenderness accompanied by a good taste. Tenderness is an example that more is not always better. Thus, not only tough, leathery or rubbery meat was perceived negatively by the women, but also meat which had a too loose or shready structure. There was no general agreement on what good taste is in relation to pork, however. Some preferred a nut-like taste, a mild taste or a mild aftertaste, while others stated they would rather have a strong taste and, specifically, a strong meat taste. Among the expressions of unfavourable tastes were strong, insipid, acid, coarse and artificial taste.

Quality perception and objective quality

In the ranking procedures, the pork samples were divided into four categories according to their perceived quality. The categorisation shows considerable differences between the expected quality, ie the quality assessed through an evaluation of the appearance of the meat, and the experienced quality, ie the quality evaluated upon tasting the meat. Thus, some meat samples were not able to fulfil the pre-consumption quality expectations, while the experience of the quality of other meat samples clearly exceeded the expectations.

Generally, pork chops which are cut from the neck end of a loin have a considerably larger degree of fat marbling than pork chops from the hip end, as meat from the hip end primarily consists of one large, coherent muscle edged by fat, while meat from the neck end is typically compounded of several muscles which are separated by connective tissue and fat. In the study, all pork chops cut from the hip end were given the best evaluations with regard to expected quality, while the pork chops from the neck end of the loins were given the poorest evaluations. However, the meat from the neck end was generally experienced as having a higher quality than expected, whereas the meat from the hip end could generally not live up to the expectations when tasted. In total, no major absolute differences in experienced quality could therefore be stated based on the cutting.

The origin of the meat in terms of slaughterhouse did not seem to provoke different evaluations, despite the fact that three loins were from a dehiding slaughterhouse, where the skin of the carcass is removed before the cutting up, while the remaining four loins were from a slaughterhouse where the carcasses are scalded and singed.

Technical measurements of drip loss, intramuscular fat and colour were taken on the seven loins to obtain a direct measure of the objective quality of the pork samples. The measurements showed that particularly two samples displayed a poor objective quality and could actually be classified as PSE (Pale, Soft and Exudative) meat. Results show that the women actually preferred the PSE meat from the hip end in the visual evaluations, but were immensely disappointed when tasting the meat. Apart from that, no clear relations to these objective criteria could be found.

Concluding remarks

Altogether, the results indicate that consumers employ quite a large number of intrinsic quality cues to assess the quality of pork, with fat as the primary product characteristic. Good pork quality, in the minds of consumers, seems to be associated both with a perceived high health-related quality and good eating quality, but is apparently only weakly related to objective product characteristics.

The study has provided a list of variables with regard to intrinsic quality cues and aspects of the quality of pork, based on consumers' own language, which point to a considerable complexity of consumers' quality perception with regard to meat. Next step would be to weight and prioritize these variables in a quantitative study.

Literature

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