

# Consumer Interest and Marketing Potential of Information on Fish Labels

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**Abstract**— Food labels are an important source of information to consumers. However, little scientific evidence is available on the type of information consumers seek on product labels and how consumers use food labels. The objective of this study is to assess consumers' use of mandatory information cues and interest in potential information cues placed on fish labels, packages or shelves in five European countries. A cross-sectional consumer survey was carried out in November-December 2004 in five European countries: Belgium, Denmark, the Netherlands, Poland and Spain and a sample representative for age and region within each country has been obtained. Total sample size is 4,786. The results show a high use of on-label information cues; hence, labels were found as good, and potentially market effective sources of information. Consumers were most familiar with expiry date, price, species name and weight and they felt able to derive clear quality expectations from the information these cues convey. Consumers displayed the strongest interest in an additional information cues, such as safety guarantee and a quality mark for seafood. Cross-country differences in both use and interest in fish information cues were observed.

**Keywords**— consumer, fish, label

## INTRODUCTION

Food labels are one of the most used and trusted sources of information by Europeans [1]. Food labels are an important source of information to consumers [2,3], who have in general positive attitudes towards labels. Furthermore, food labels are often believed to perform a function as heuristics or easy decision rules [4]. Nevertheless, several studies have shown that food labels may be of little use, because lack of knowledge and low ability to perform simple inference-making leads to failure in decoding the information [5,6]. Another recognised problem with regard to food labels is risk of information overload and potential adverse effects resulting from consumer indifference or misunderstanding when confronted with too much information on the package or label [7,8]. Relatively

little research is available about the type of information consumers seek and use on product labels. The objective of this study was to explore consumers' use of mandatory and potential fish information cues on fish labels, packages or shelves in five European countries.

## MATERIALS AND METHODS

Our data were collected through a quantitative cross-sectional consumer survey carried out in November-December 2004 in five European countries: Belgium, Denmark, the Netherlands, Poland and Spain. The total sample consisted of 4,786 subjects (n=800-1,100 respondents per country). The sample was composed of 3,652 women (76.3%) and 1,134 men (23.7%). This gender distribution reflects the criterion that all respondents were responsible for food purchasing within their household. A quota sampling procedure with age as main control variable was applied. Samples were representative within each country for age and region. The sample covers a wide range of consumers in terms of socio-demographics like education, income, and presence of children. The age of the respondents ranged from 18 to 84 years, with a mean of 42.7 (SD=12.6).

Respondents were asked to report how often they use eight information cues that (can) appear either on the package or on the supermarket shelf or on the product label for fish. These were: "fish species/name"; "price"; "weight"; "expiry date"; "date of capture"; "nutritional composition"; "brand name"; "capture area". Use of these cues was measured on a 7-point Likert scale ranging from "never" to "always". Additionally, consumers were asked about their interest in thirteen new emerging information cues on a 7-point Likert scale ranging from "not interested" (1) to "very interested" (7).

## RESULTS

Expiry date, price, species name and weight were the most used information cues on seafood labels, packages or shelves (Table 1). Consumers were most familiar with these cues and they felt able to derive clear quality expectations from the information these cues convey. Other cues like capture area, brand, nutritional information or date of capture were far less used. The likely reasons are consumer's lack of familiarity with this information, and lack of trust in these cues that signal typical credence attributes, i.e. attributes that consumers can hardly verify themselves, even upon purchase or during consumption of the product.

Table 1 Mean scores and standard deviation (SD) for use of information cues

Use of standard information cues	Mean (SD)
Expiry date	6.25 (1.49)
Price	5.81 (1.57)
Fish species/name	5.73 (1.64)
Weight	5.47 (1.70)
Date of capture	4.21 (2.19)
Nutritional composition	4.13 (1.95)
Brand name	3.98 (1.93)
Capture area	3.27 (1.96)

European consumers claimed a high interest in additional seafood information (Table 2). The analysis of the interest in potential information cues showed that respondents from all countries were most interested in a fish safety guarantee and in quality marks. The least interesting cue for the consumer was the batch identification number and information on the feed used during farming. Whereas consumers showed little interest in a batch identification number – how could they ever interpret or use this direct indication of traceability? – their interest in information cues that logically can result from traceability (namely a safety or quality guarantee) was extremely strong. Consumer interest in information from traceability was determined by several factors. Interest in information from traceability was higher among consumers who have a high level of trust in fish information. It was also stronger among consumers who find ethical issues (i.e. preservation of natural fish stocks and fish welfare) more important, and among consumers who

perceive more health and safety risks from consuming fish.

Table 2 Mean scores and standard deviation (SD) for interest in information cues

Use of standard information cues	Mean (SD)
Safety guarantee	5.51 (1.57)
Quality mark	5.43 (1.58)
Recipes	5.29 (1.60)
Health benefits	5.16 (1.62)
Method of preparation	5.10 (1.67)
Colorants used	4.96 (1.95)
Environmental friendly	4.85 (1.71)
Fed with genetically modified feed	4.74 (2.03)
Wild/farmed	4.72 (1.73)
Country of origin	4.64 (1.85)
Fish welfare	4.62 (1.78)
Feed used during farming	4.25 (1.95)
Batch number for product identification	4.04 (1.92)

Cross-country comparison of consumers' use of information cues displayed the lowest usage of all mandatory and potential information cues by Dutch respondents. On the contrary, Poles reported the highest usage of the mandatory information cues and nutritional composition; and the highest interest in health benefits and the lowest in fish welfare across the countries. Danes indicated the highest usage of expiry date, date of capture, and nutritional composition and the strongest interest in information cues related to the origin of fish (wild/farmed, batch number for product identification, country of origin, colorants used), sustainability issues (environmental friendly, fish welfare, feed used during farming, and fed with genetically modified feed), but also method of preparation, safety guarantee and, together with Belgian respondents, quality mark. Spanish respondents displayed the highest usage of capture area and the lowest use of expiry date, the latter corresponding with their greatest experience and familiarity with evaluating freshness and quality of fish. Belgian consumers reported moderate to rather low usage of these standard information cues as compared to the other countries. Noteworthy, the partial eta-squared values were on a very low level (below 0.06), suggesting that the differences between the countries were rather small and the significance is rather a result of a large sample size.

Women and the oldest respondents (above 55 years of age) used significantly more frequent standard information cues and were the most interested in potential information cues than men and younger consumers. Higher educated consumers indicated to use fish species name and capture area more frequently than the other respondents. Furthermore, they showed the strongest interest in all proposed potential information cues.

### CONCLUSIONS

In general, labels were found to be good, market effective, sources of information. Consumers were most familiar with information cues like expiry date, price, species name and weight and they felt able to derive clear quality expectations from the information these cues convey. The strongest interest in potential information cues was displayed for a safety guarantee and a quality mark for seafood. Marketers could take advantages of the high usage of information cues placed on fish labels, and high interest in a safety guarantee and quality mark as potential information cues among a large majority of the consumers. It provides opportunities for effective and efficient communication through seafood labels. Furthermore, by introducing such a safety guarantee or quality mark as information cues, consumers trust (which now is on moderate level, see [9]) in information provided by the fish industry could possibly raise, at least if this introduction can be backed up by trustworthy controls and guarantees provided by watertight traceability.

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