HALAL PRODUCTS FROM THE CONSUMERS PERCEPTION.
AN ONLINE SURVEY.

Nuradli Ridzwan Shah Mohd Dali, Suhaila Sulaiman, Akmaliah A.Samad, Nurbaiti Ismail, 
Siti Hajar Alwi 
Faculty of Economy & Muamalat, Islamic University College of Malaysia, 71800 Bandar 
Baru Nilai, Negeri Sembilan, Malaysia

Abstract
The development of Islamic banking shows that Muslims are concerned with the禁止的 riba and would like to ensure that their investments are pure or halal. Nevertheless, not only transactions in business, banking and investment that require halal, the food industry must follow the same requirement because Muslims are required to consume halal food and products as promulgated by the Quran. Jabatan Kemajuan Islam Malaysia (JAKIM) has come out with halal standard and logo initiatives to ensure that Muslim consumer’s rights to halal foods and products are protected. This research would examine the consumers’ perception on the halal logo and ingredients compared to the respondents’ demographics profiles.

1.0 Introduction

There are several cases or issues where products sold to Muslim consumers were questioned on its halal status. In an extreme case, a manufacturer using non-halal ingredients in making sausages was highlighted by media to public attention. Even though it was an isolated case, but it shows the lacking of sensitivity on the rights of Muslims consumers by the food manufacturers. Therefore, the Muslim consumers through several associations has voiced out the problems at hand demanding that the authority to take necessary actions to avoid unethical producers to manipulate the consumers in ensuring profit is maximized. Even though Jakim has come out with the initiatives of introducing halal logo and standards for food and products, unscrupulous producers imitate the halal logo to deceive Muslim consumers. It is with that motivation; this research is conducted to identify how consumers make decisions in buying halal food or products.

1.1 Problem Statement

The problem of Muslim consumers being deceived by unscrupulous manufacturers using prohibited ingredients in their products and services with halal certification must be solved to gain the Muslim confidence in acquiring the products and services. Several unresponsible manufacturers have been caught either using the fraud logo or misrepresentation of the actual ingredients have made the halal logo is questionable. There is a need for the determination of the perceptions of the Muslim buyers on the way they actually make their purchase decisions in order to identify whether the halal logo do give an impact to the decision making process of a purchase.

On the other hand non Muslims did not care whether the food is halal or haram but it is also imperative to see if they actually purchase the halal certified products and services because the manufacturers have followed the Halal standard in its operation.

There is also another problem associated with the halal logo certified by Jakim and other private institutions or non profit organizations. The perception of the Muslim consumers might be different or indifferent when comparing the products certified by Jakim and other organizations in Malaysia.

1.2 Objective of Study

There are several objectives of the study:

a) To determine the consumers perception on the halal logo
b) To determine the consumers perception on the ingredients on the packaging.
c) To determine whether perceptions on the halal logo and ingredients between gender are significant different or not.
d) To determine whether perceptions on the halal logo and ingredients between race are significant different or not.
e) To determine whether perceptions on the halal logo and ingredients between religion are significant different or not.

f) To determine whether perceptions on the halal logo and ingredients between marital status are significant different or not.

g) To determine whether perceptions on the halal logo and ingredients between age are significant different or not.

h) To determine whether perceptions on the halal logo and ingredients between education are significant different or not.

1.4 Literature Review

Halal is an Arabic word meaning lawful or permitted. The opposite of Halal is Haram, which means unlawful or prohibited. Halal and Haram are universal terms that apply to all facets of life. However, we will use these terms only in relation to food products, meat products, cosmetics, personal care products, food ingredients, and food contact materials.

While many things are clearly Halal or clearly Haram, there are some things which are not clear. These items are considered questionable or suspect and more information is needed to categorize them as Halal or Haram. Such items are often referred to as Mashbooh, which means doubtful or questionable.

All foods are considered Halal except the following, which are Haram:

- Swine/pork and its by-products
- Animals improperly slaughtered or dead before slaughtering
- Animals killed in the name of anyone other than ALLAH (God)
- Alcohol and intoxicants
- Carnivorous animals, birds of prey and land animals without external ears
- Blood and blood by-products
- Foods contaminated with any of the above products

The term Halal, which is the Islamic counterpart of Kosher, and means permitted or allowed to Muslims. Halal certification of food is becoming increasingly important as the country’s Muslim population grows. It is also important for the export business (Berry Donna, 2000).

A halal sign was usually enough to convince any Muslim that the food sold was what it said. The halal food business is certainly a profitable one, especially in areas populated by Muslims. Muslim customers must have a curiosity personal about the product. It is because, the some retailer want to attract the Muslim customer to buy their product even though they produce or use the prohibited way.

Malaysia is coordinating and developing its halal products industry. The halal certification producers will be streamlined as well as coordinated with the development of industrial zones for halal products (Sadna Saifuddin, 2003). Halal Foods that conform to Islamic dietary laws specified in the Koran can served as a medium to penetrate the large and growing Muslim market and exporting them would shore up Malaysian food
exports. The influences of culture upon consumer desired value perception to perceive from buying and using product. Consumer perception of products or service value is determined not only by intrinsic dispositions, but also by internalized cultural values and norms, and external contextual factors (Overby, Jeffrey, Woodruft, Robert B, Gordial Sarah Fisher, 2005).

Halal certification will soon be regulated with the setting up of a company to undertake the responsibility. The problem is that each state has its own way of certification which results in the use of different halal logo from state to state. As a products certified as halal given state are sold throughout the country, this causes confusion when enforcement officers are checking on the products to as certain if they are halal (NST, 2003). In addition, the government will not conduct research or issue certificates for ‘non-halal’ food as it would be prejudiced against manufactures and retailers of such products. Therefore, the public should not be alarmed or misled by unfounded rumors. The halal certifications, distinguished by the official logo of Jabatan Kemajuan Islam Malaysia (JAKIM), will not be forced upon any manufacturer especially the non halal manufacturers (Paramjeet Kaur, 2000)

JAKIM will be sole issuer of halal certification in the country after amendments are made to the Trade Description Act 1972. The amendments are expected to take place this year to standardize the halal certification and avoid confusion among the producers and importers of halal logo (Hamisah Hamid, 2003).

Currently, the halal logo is displayed in the packaging or label of the products. Sidiga Washi in a research on the nutritional on food labeling in Saudi Arabia mentioned that the Food labeling is the primary means of communication between the producers and sellers of food, and the purchaser and consumer (Sidiga Washi).

Advertising spending is a signal of product quality for experience good because consumer can rationally inter that high-quality product would advertise more than low-quality product (Moothy, Sridhar, 2005). Religion plays a significant role in influencing social and consumer behavior. A study by Fan, Kim Shyan, Waller, David S., and Erdogan, B. Zafer analyzed what influence religion and intensity of belief has on attitudes towards the advertising of particular controversial products and services. The result indicated some statistically significant differences between the groups, which can have important implication for consumer (Fan, Kim Shyan, Waller, David S., Erdogan, B. Zafer, 2004).

Xiang Fang and Mowen, John discusses the factors influencing the effectiveness of logos in the product labels. Respondent preferred a regular logo for building but around logo for the vase. High visual-orientation individuals liked an advertisement with round logo only the realistic condition (Xiang Fang and Mowen, John, 2003).
A research done by Veloutsou Cleopatra, Giolistanis Evangelos, Mountinho Luiz (2004) on the factors influencing the willingness to buy from consumer is the own label brands offered by supermarket. It compares the importance of choke criteria when purchasing own label and national brands and the perceived characteristics of the products carrying store and manufacture. Result show that own label and manufacturer brands have overall different stage positioning (Veloutsou Cleopatra, Giolistanis Evangelos, Mountinho Luiz 2004).

Another important factor that Jakim must consider is to provide website for consumers to check on the halal status. Growing concern food safety issues dependence on the Internet as a source of information. It is also to examine the presence and relevance of food safety-related information on Web-Sites. It also to conduct the current personal status governmental web sites on food safety issues. This study also to evaluated usability information dimensionalities such as utility, currency and relevant content from consumer (Young Namkung, Barbara Al Almanza, 2006).

There are a so many research has been done in the western world about the perception of the consumers’ on the packaging or labels but none has done a research on eh perception of halal logo especially in Malaysia. It is this aspect that we expect to make a contribution of knowledge for the benefits of the academia, government, Jakim, halal producers, Muslim consumers and the society as a whole.

2.0 Data and Methodology
Online questionnaires were used in this research as the primary data. The sampling method is using convenience samplings which are by sending emails to personal contacts directing them to a web-survey website. There are 21 questions and there are divided into 3 sections. The sections are the demographic profile of respondents, the respondents’ perception on Halal’s logo and the ingredient on Halal’s food”. The questionnaire was uploaded at www.my3q.com/fsdfg from 11/10/2006 until 08/11/2006. The analysis used in the research is using simple basic statistics analysis such as anova.

3.0 Result
There were 105 respondents that participated in the survey and seventy of the respondents are females and thirty five are males. 104 respondents are Muslims and only one respondent is Hindu.

Before we get the finalist result, we make an analysis to get it. For analysis our data, we use the descriptive statistics, Cronbach’s Alpha, ANOVA, and regression.
3.1 Analysis

3.1.1 Respondents Demographic Profiles
The total respondents participated in the survey were 105 and 66.5% of the respondents or 70 are females while 33.3 respondents are males or 35 people. Majority of the respondents are Malays which are approximately 96.2% or 101 respondents. There is only one Indian who participates in the survey while three respondents are from other races. Majority of the respondents’ religion are Islam and only one who are Christian. 81 respondents are single or about 77.1% from 105 respondents. 23 (21.9%) are married and 1 (1%) is divorced. The majority of the respondents are from the range of 18 until 21 years old approximately 64 respondents (61%) from 105 respondents. Majority of the respondents are having a degree for the education background.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Female</td>
<td>70</td>
<td>66.7</td>
<td>66.7</td>
<td>66.7</td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>33.3</td>
<td>33.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Malay</td>
<td>101</td>
<td>96.2</td>
<td>96.2</td>
<td>96.2</td>
</tr>
<tr>
<td>Indian</td>
<td>1</td>
<td>1.0</td>
<td>1.0</td>
<td>97.1</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>2.9</td>
<td>2.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Islam</td>
<td>104</td>
<td>99.0</td>
<td>99.0</td>
<td>99.0</td>
</tr>
<tr>
<td>Christian</td>
<td>1</td>
<td>1.0</td>
<td>1.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Married</td>
<td>23</td>
<td>21.9</td>
<td>21.9</td>
<td>21.9</td>
</tr>
<tr>
<td>Single</td>
<td>81</td>
<td>77.1</td>
<td>77.1</td>
<td>99.0</td>
</tr>
<tr>
<td>Divorced</td>
<td>1</td>
<td>1.0</td>
<td>1.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
</table>

6
### Education

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>3</td>
<td>2.9</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Diploma</td>
<td>81</td>
<td>77.1</td>
<td>77.1</td>
<td>80.0</td>
</tr>
<tr>
<td>Degree</td>
<td>9</td>
<td>8.6</td>
<td>8.6</td>
<td>88.6</td>
</tr>
<tr>
<td>Master</td>
<td>6</td>
<td>5.7</td>
<td>5.7</td>
<td>94.3</td>
</tr>
<tr>
<td>PhD</td>
<td>6</td>
<td>5.7</td>
<td>5.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>5.7</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### 3.1.2 Reliability Analysis

**Cronbach’s Alpha**

The reliability test measures the internal consistency and stability of the multi-item scales. Commonly used reliability test is the Cronbach’s alpha. The Cronbach’s alpha measures the internal consistency or homogeneity among the multi-item scales such as the interval level measurement. Its coefficient measures how well the items in the measurements are positively correlated to one another. The closer the estimated Cronbach’s alpha coefficient to 1, the higher the internal reliability of the multi-item scales. The Cronbach’s alpha is 0.745 and it is relevant and showing internal consistency.

#### Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.745</td>
<td>14</td>
</tr>
</tbody>
</table>

### To Determine The Consumers Perception On The Halal Logo And The Ingredients On The Packaging.

#### Descriptive Statistics

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 8-I will always find the Halal's Logo on the product packaging before buying any products or goods.</td>
<td>4.61</td>
<td>.686</td>
</tr>
<tr>
<td>Question 9-All food and other consumer products must get the halal's verification from JAKIM.</td>
<td>4.70</td>
<td>.774</td>
</tr>
<tr>
<td>Question 10-The method of manufacturing is also important in the determining the halal status.</td>
<td>4.76</td>
<td>.564</td>
</tr>
<tr>
<td>Question 11-Islamic consumers have the right to report on any fraud Halal logo presented by manufacturers.</td>
<td>4.74</td>
<td>.605</td>
</tr>
<tr>
<td>Question 12-The Halal food and drink product should be separated for Muslim and non-Muslims.</td>
<td>4.27</td>
<td>1.146</td>
</tr>
</tbody>
</table>
Question 13-Beside JAKIM, private company can be authorized to produce the Halal's logo.  
Question 14-JAKIM must take action on all manufacturers who do not follow the Halal standard. 
Question 15-My selection of food and drink is influenced by others even though the products do not have the Halal logo. 
Question 16-I choose to buy products with JAKIM's Halal logo as compared buying any other product with Halal logo produced by the manufacturers. 
Question 17-I choose food and drink based on the halal and not based on "taste" only. 
Question 18-I am concern with the food that I take. 
Question 19-The ingredients of the food and drink are very important for consumers. 
Question 20-The expired date of the product is important. 
Question 21-Using preservative in food and drink product is acceptable. 

Valid N (listwise)

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 13-Beside JAKIM, private company can be authorized to produce the Halal's logo.</td>
<td>2.54</td>
<td>1.461</td>
</tr>
<tr>
<td>Question 14-JAKIM must take action on all manufacturers who do not follow the Halal standard.</td>
<td>4.66</td>
<td>.875</td>
</tr>
<tr>
<td>Question 15-My selection of food and drink is influenced by others even though the products do not have the Halal logo.</td>
<td>3.22</td>
<td>1.209</td>
</tr>
<tr>
<td>Question 16-I choose to buy products with JAKIM's Halal logo as compared buying any other product with Halal logo produced by the manufacturers.</td>
<td>4.18</td>
<td>.918</td>
</tr>
<tr>
<td>Question 17-I choose food and drink based on the halal and not based on &quot;taste&quot; only.</td>
<td>4.35</td>
<td>.784</td>
</tr>
<tr>
<td>Question 18-I am concern with the food that I take.</td>
<td>4.39</td>
<td>.826</td>
</tr>
<tr>
<td>Question 19-The ingredients of the food and drink are very important for consumers.</td>
<td>4.72</td>
<td>.686</td>
</tr>
<tr>
<td>Question 20-The expired date of the product is important.</td>
<td>4.77</td>
<td>.654</td>
</tr>
<tr>
<td>Question 21-Using preservative in food and drink product is acceptable.</td>
<td>3.29</td>
<td>1.158</td>
</tr>
</tbody>
</table>

Based on the result it shows that the consumers are concerned with the halal logo and also the ingredients in the packaging of a product. This could be seen from the mean of the variables tested.

**To Determine Whether Perceptions On The Halal Logo And Ingredients Between Gender Are Significant Different Or Not.**

T Test is used to test whether the perception on Halal logo is significant difference of individual’s gender or not at two tails 5% significant level.

- Ho: There is no significant different between individual’s gender (p value > alpha of 0.05)
- H1: There is significant different between individual’s gender (p value < alpha of 0.05)

<Insert Appendix 1 here>

From the result we can conclude that female respondents are more concern (strongly agree) that all food and other consumers products should get the halal verification from Jakim as compared to male respondents (agree) at 5% significant level. For the rest of the variables there are no significant different between male and female.

**To Determine Whether Perceptions On The Halal Logo And Ingredients Between Race Are Significant Different Or Not.**

The one-way analysis of variance (or abbreviated as one-way ANOVA) is used to compare three or more means in a single factor. The one-way ANOVA uses the F test to compare more than two means of a single factor simultaneously. Anova is used to test whether the perception on Halal logo is significant difference between individual’s race.

- Ho: There is no significant different between individual’s race (p value > alpha of 0.05)
• H1: There is significant different between individual’s race (p value <alpha of 0.05)

<Insert Appendix 2 here>

Based on the Anova result all off the variables are significant different for race except for private company can also be authorized to produce the Halal's logo, I choose food and drink based on the halal status and ingredients not based on taste solely and I am concern with the food that I take. However, a further detailed analysis with the homogeneity of variance and post hoc comparison, the Malay and Indians are significant different using tamhane analysis since the variances are not homogeneous. The Malays are unsure whether to let the private company to produce the halal certificate (Mean of 2.54) while the Indians disagree with the idea of having other than Jakim (Mean of 2.00).

To Determine Whether Perceptions On The Halal Logo And Ingredients Between Religion Are Significant Different Or Not.
• Ho: the perception on Halal logo is not significant different of individual’s religion (p value > alpha of 0.05)
• H1: the perception on Halal logo is significant different of individual’s religion (p value <alpha of 0.05)

<Insert Appendix 3 here>

All of the variables are significant different between religion except for statement my selection of food and drink is influenced by the Halal logo and ingredients and not based on the taste solely and I not concern with the food that I take which are not significant different at 5% significant level.

To Determine Whether Perceptions On The Halal Logo And Ingredients Between Marital Status Are Significant Different Or Not.
• Ho: the perception on Halal logo is not significant different of individual’s marital status (p value > alpha of 0.05)
• H1: the perception on Halal logo is significant different of individual’s marital status (p value <alpha of 0.05)

<Insert Appendix 4 here>

All of the variables are significant different between marital status except for the statement beside JAKIM, private company can be authorized to produce the Halal logo,and I am concern with the food that I take at 5% significant level.

To Determine Whether Perceptions On The Halal Logo And Ingredients Between Age Are Significant Different Or Not.
• Ho: the perception on Halal logo is not significant different of individual’s age (p value > alpha of 0.05)
• H1: the perception on Halal logo is significant different of individual’s age (p value <alpha of 0.05)
All of the variables are not significant different at 5% significant level between age except for all food and other consumer products must get the halal's verification from JAKIM which is significant at 5% level of significant.

**To Determine Whether Perceptions On The Halal Logo And Ingredients Between Education Are Significant Different Or Not.**

- **H0:** the perception on Halal logo is not significant different of individual’s education background (p value > alpha of 0.05)
- **H1:** the perception on Halal logo is significant different of individual’s education background (p value < alpha of 0.05)

There are 5 variables that are significant different at 5% level of significant. The variables are I will always find the Halal Logo on the product packaging before buying any products or goods, all food and other consumer products must get the halal verification from JAKIM, the method of manufacturing is also important in the determining the halal status, I choose to buy products with JAKIM's Halal logo as compared buying any other product with Halal logo produced by the manufacturers and using preservative in food and drink product is acceptable.

**4.0 Conclusion**

The Muslim consumers’ perception on the halal logo and the ingredients on the products label are positive. However there are several variables which are different between gender, race, religion, marital status, age and education background which could be focused by manufacturers who want to have a niche market in their marketing strategy. Female respondents are more concern that all food and other consumers’ products should get the halal verification from Jakim as compared to male respondents.

Furthermore, the halal logo is significant for Muslim consumers as compared to non Muslims and also to diploma and degree holders as compared to higher level of education. As Islamic consumers are more concern about the halal logo, majority of them will be looking for the halal logo before buying any product or good on the product packaging. This would be an opportunity for many food manufacturers in tapping the Muslims market especially in Malaysia.

**REFERENCES:**


Freiden, Jon B. The effect of nutrition information on brand rating test for non-use benefit.

Gogdi, Pallani, The Truth About Food Expiration Dates, Business Week Online, 10/2/2006, P14-14,1P.

Hamid Hamidah. JAKIM to be Sole Issue after Amendments to ACT. Business Times (Malaysia)-14/02/2003


Ismail Zaidi Isham. Local Firms, MARDI in Talks to Tap Global Halal Markets. Business Times (Malaysia) – 25/10/2000


Journal of Consumer Affairs. (Madison: Summer 1981 vol.15 Issue 1 pg. 106, 9 pgs)


Kaur Paramjeet. GOVT Won’t Issue Certificates for non- halal Food Stuff. Business Times (Malaysia)-20/10/2000


Overby, Jeffrey, Woodruff, Robert B, Gordial Sarah Fisher. The influence of culture upon consumers desired value perceptions: A research agenda.


Riaz, Mian, Examining the Halal Market, Prepared Foods.

Riyadi, World Noodle Producers Agree To ‘Halal’ Status, Jakarta Port (Indonesia) 2/13/1999.

Saifuddin Sadna. Committee to Help Develop Halal Products Industry. Business Times (Malaysia) – 22/03/2003

Shahryar, Omar, Hunt, David M. Buyer behaviors and procedural fairness in pricing: Exploring the moderating role of product familiarity. Journal of product & brand management (2005, vol 14 issue 4, p271-


Unanimous, Banking on Halal Label. Nation, the (Thiland)-27/7/2001

Unanimous, Company to Carry out Halal Certification. Nation, the (Thiland)-27/7/2001

Unanimous, Don’t Believe Rumors Over ‘Halal’Cert, Muslims Told, New Straits Times (Malaysia) 7/1/2003.

Unanimous, Ministry and Jakim Will Ensure ‘Halal’ Food Conforms to Guideline, New Straits Times (Malaysia) 14/1/2000.

Unanimous, Potential for More Trade In Halal Food Products, Business Times (Malaysia) 10/17/2003.

Unanimous, Standard Logo For Halal Food Products, Business Times (Malaysia).

Unanimous, Thai Halal Food-Making Hub Planned for Oman, Nation, the (Thailand) 02/13/2004.


Wirthgen, Antle. Consumer, retailer and producer assessment of product differentiation according to regional origin and process quality.


