Consumer Attributes of Farmhouse Cheese and Honey
CONSUMER ATTRIBUTES OF
FARMHOUSE CHEESE AND HONEY

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This research was carried out within the framework of the EU-FAIR programme (Project FAIR- CT95-0360 “Agro-alimentaire Paysan Européen”), the authors acknowledge EU financial support from this programme.

ISBN 1-84170-158-0
December 2000

Teagasc 19 Sandymount Avenue Ballsbridge Dublin 4
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This study determined the ideal combination of attributes of farmhouse cheese (cheddar-type) and farmhouse honey for different consumer segments. An analysis estimated potential market share of ideal versus existing products. The price sensitivity of the products was also analysed. A sensory analysis ascertained the distinctive features that consumers of farmhouse foods use to differentiate them from equivalent industrial products.

The main results for cheese are:

- **Ideal cheese**: The ideal farmhouse cheese was one which constituted the following: a strong flavour, hard texture, a wax packaged wheel, made with pasteurised milk, nutritional information provided on the package, a white coloured cheese, a price of £2.50/Euro 3.17 for 250 g.
- **Segmentation**: Two clusters of consumers with different ideal product profiles were identified. Segment 1 consumers' ideal cheese was made with pasteurised milk, priced at £2.00/Euro 2.54 whereas unpasteurised milk and a price of £2.50/Euro 3.17 was ideal for Segment 2.
- **Price sensitivity**: Consumers in both segments were insensitive to price, with a wide range of acceptable prices.
- **Distinctive features**: Features that distinguish farmhouse from factory cheeses were not identified.

The main results for honey are:

- **Ideal honey**: The ideal farmhouse honey was priced at £1.95/Euro 2.48 in a 1 lb. plain glass jar, with a thick texture, a dark golden colour and made by a small scale producer.
- **Segmentation**: Cluster analysis revealed three consumer segments with different ideal product profiles. For Segment 1, the most important attribute was scale of production with a higher utility attached to small-scale production as opposed to mass production. For Segment 2, price was the most important attribute while for Segment 3, texture was the most important.
- **Market share**: All farmhouse honeys had similar market-share predictions.
- **Price sensitivity**: Honey is price sensitive. The range of acceptable prices that a producer could charge varied from about £1.85/Euro 2.45 to about £2.30/Euro 2.92 for a 454 g /1 lb jar of 100% pure Irish honey.
Distinctive features. There is considerable sensory difference between brands but there is no evidence to suggest that the sensory differences are due to a farmhouse or commercial origin.

Overall it was concluded from the analysis of both products that these farmhouse foods are not distinctively different from their industrial equivalents in terms of sensory aspects. However, some consumers value them for other attributes notably scale of production.

INTRODUCTION

The project “Agro-alimentaire Paysan Européen” examined consumer behaviour in the purchase of farmhouse foods in the EU. Two products were chosen for analysis in each participating country. In Ireland, these were farmhouse cheese (cheddar-type) and farmhouse honey. The aim was to determine the distinctive features of farmhouse foods that, for consumers, differentiate them from their industrial equivalents. To achieve this, the project was divided into the following components:

- a consumer analysis to determine the combination of attributes of ideal cheeses and honeys in terms of the attributes that differentiate one cheese/honey from another and the importance of price in the consumer’s decision to purchase a farmhouse product;
- a sensory analysis of selected cheeses and honeys to determine organoleptic qualities.

OBJECTIVES

The objectives of the study were:

1. To identify the attributes of an ‘ideal’ Irish farmhouse cheese/honey in the minds of consumers, in terms of which attributes influence choice of product and the respective levels of these attributes (e.g. cheese colour is the attribute and it has two levels, red and white);

2. To find out, within this concept of an ‘ideal’ Irish farmhouse cheese/honey, if different segments of consumers exist, with similar preferences/utilities for the different attributes and their respective attribute levels.
3. To determine market-share predictions of the commercial products used for analysis and the ideal products for each segment or cluster.
4. To determine an acceptable price-range for a farmhouse cheese and honey.
5. To determine if there are distinctive sensory features that differentiate farmhouse foods from their industrial equivalents.

**METHODS**

**Products:** Six hard and semi-hard cheddar-type farmhouse cheeses, and two factory produced Cheddar cheeses were used: Baylough, Ring, Kerry, Bandon Vale – Vintage, Carrigaline, Knockananore, Avonmore Glenmills— (mass produced) and Kilmeaden White Cheddar (mass produced).

Five farmhouse honeys, two factory honeys and one honey which is also regarded as farmhouse but produced on a larger scale than other farmhouse honeys, were used. The honeys were: Molaga, David Lee, Noonans, Kingston, Colchester (all farmhouse), Mileeven (intermediate), Boyne Valley and Chivers (mass produced).

**Consumer groups and surveys:** Focus groups in the Dublin area were used for each of the two product types to ascertain the attributes and their associated levels that were important when choosing which Irish farmhouse cheese and honey to buy. These attributes and their levels were then used to compile profile cards of hypothetical farmhouse cheese/honey products. These were used to prepare questionnaires for consumer surveys for both products. For cheese, 256 consumers were interviewed in shopping malls in the Dublin area while for honey, 153 consumers were similarly interviewed in the Dublin and Cork areas.

Conjoint analysis was applied to the data to calculate both the importance of the various attributes and the part-worth utility scores of each of the attribute levels so as to determine the constituents of an “ideal” Irish farmhouse cheese/honey. The utility determines how influential each attribute is in the evaluations of the consumers. It is a measure of consumer satisfaction with that attribute. Cluster analysis was used to group consumers into market segments based upon the similarity of their responses to the conjoint product profile cards. Simulation models were developed to predict the market shares of the products tested and of the ideal products identified for each market.
Sensory analysis: A trained sensory panel determined the organoleptic properties of the cheeses and honeys used in the consumer analysis. In addition, 201 naïve consumers were asked to express their preferences for the cheeses. These consumer tastings took place at six outlets in the south of Ireland, including supermarkets and markets in both urban and rural areas. The consumer sample was based on a quota sample calculated from the most recent census of population. All participants were regular cheese consumers. The research questions were: Does each product have distinct characteristics and are there differences between farmhouse and industrial products?

CHEESE RESULTS

Consumer

The results of the consumer analyses are presented below.

Ideal Cheese: Focus groups established that the most important attributes (and their levels) in choice of purchase of 200g of Irish farmhouse cheese were: flavour (strong or mild), texture (hard or soft), price (£1.50/Euro 1.91, £2.00/Euro 2.54 or £2.50/Euro 3.17), nutritional information (present on the label or not present), pasteurisation (pasteurised or raw), packaging (waxed wheel, cling-film wedge, or vacuum packed wedge) and colour of the cheese (red or white).

Conjoint analysis of the consumer survey data showed that the attributes of the ideal farmhouse cheese were: a strong flavour, a hard texture, a wax packaged wheel, made with pasteurised milk, nutritional information present on the package, a white coloured cheese, and a price of £2.50/Euro 3.17. Packaging was regarded as the most important attribute followed by flavour, price, colour, nutritional information, pasteurisation and texture. Within price, £2.50/Euro 3.17 was the level considered to have the highest utility followed by a price of £2.00/Euro 2.54 and then a price of £1.50/Euro 1.91. This shows that the respondents were not sensitive to price.

Consumer clusters: Cluster analysis revealed two segments with different ideal product profiles. Segment 1’s ideal farmhouse cheese comprised a strong flavour, hard texture, a wax packaged wheel, made with pasteurised milk,
nutritional information provided on the package, a white coloured cheese and a price of £2.00/Euro 2.54. The most important factor for consumers in Segment 1 was packaging and price was least important (Table 1). Within price, £2.00/Euro 2.54 was considered to have the highest utility followed by £2.50/Euro 3.17 and then £1.50/Euro 1.91 (Table 2). This shows that consumers in Segment 1 were insensitive to price.

Segment 2 differed from Segment 1 in that its ideal cheese was made with unpasteurised milk and priced at £2.50/Euro 3.17. Flavour was the most important attribute, followed by packaging, nutritional information on the label, texture, price, pasteurisation and finally colour (Table 1). Within price, £2.50/Euro 3.17 was considered to have the highest utility followed by £1.50/Euro 1.91 and then £2.00/Euro 2.54. The consumers in Segment 2 were again insensitive to the price, deriving a higher utility from a higher priced cheese (Table 2).

Market share predictions: The “ideal” product profile for each segment was identified as having the largest market-share under both market share simulation models used. The soft farmhouse cheese also achieved a high market share prediction. Nearly all of the remaining cheeses, whether farmhouse or factory, pasteurised or raw commanded relatively equal but smaller shares.

### Table 1: Cheese - importance scores (percent) for each cheese attribute

<table>
<thead>
<tr>
<th>Attribute</th>
<th>All 256 consumers</th>
<th>Cluster 1 (139 consumers)</th>
<th>Cluster 2 (117 consumers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flavour</td>
<td>34</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>Texture</td>
<td>6</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Packaging</td>
<td>35</td>
<td>33</td>
<td>23</td>
</tr>
<tr>
<td>Pasteurisation</td>
<td>11</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Information</td>
<td>11</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>Colour</td>
<td>11</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Price</td>
<td>17</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

The most important attribute is shown in bold and the least important attribute is shown in italics and underlined.
Price sensitivity: The absolute price range for 200g of Irish farmhouse cheese was from £1/Euro 1.27 to £6/Euro 7.62. Both below and above these respective prices no consumer was willing to pay. The range of acceptable prices was from £1.75/Euro 2.22 to £2.90/Euro 3.68. The indifference price was £2.15/Euro 2.73 for 200g of Irish farmhouse cheese. This was seen as the "normal" price by seventy two per cent of respondents. This indicated a low level of price consciousness.

Table 2: Utility scores of cheese attributes for total market and market segments

<table>
<thead>
<tr>
<th>Level of Attribute</th>
<th>All consumers (256)</th>
<th>Cluster 1 (139 consumers)</th>
<th>Cluster 2 (117 consumers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flavour - Strong</td>
<td>.27</td>
<td>.26</td>
<td>.27</td>
</tr>
<tr>
<td>- Mild</td>
<td>.27</td>
<td>.26</td>
<td>.27</td>
</tr>
<tr>
<td>Texture - Hard</td>
<td>.05</td>
<td>.04</td>
<td>.03</td>
</tr>
<tr>
<td>- Soft</td>
<td>-.05</td>
<td>-.04</td>
<td>-.07</td>
</tr>
<tr>
<td>Packaging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Waxed Wheel</td>
<td>.27</td>
<td>.38</td>
<td>.16</td>
</tr>
<tr>
<td>- Clingfilm</td>
<td>-.27</td>
<td>-.33</td>
<td>-.20</td>
</tr>
<tr>
<td>- Vac-packed Wedge</td>
<td>-.004</td>
<td>-.04</td>
<td>-.05</td>
</tr>
<tr>
<td>Pasteurisation</td>
<td>.05</td>
<td>.12</td>
<td>-.04</td>
</tr>
<tr>
<td>- Raw</td>
<td>-.05</td>
<td>-.12</td>
<td>.04</td>
</tr>
<tr>
<td>Nutritional Information provided</td>
<td>.15</td>
<td>.14</td>
<td>.17</td>
</tr>
<tr>
<td>- No</td>
<td>-.15</td>
<td>-.14</td>
<td>-.17</td>
</tr>
<tr>
<td>Colour - Red</td>
<td>-.08</td>
<td>.13</td>
<td>-.01</td>
</tr>
<tr>
<td>- White</td>
<td>.08</td>
<td>.13</td>
<td>-.01</td>
</tr>
<tr>
<td>Price - £1.50/Euro 1.91</td>
<td>-.03</td>
<td>-.03</td>
<td>-.03</td>
</tr>
<tr>
<td>- £2.00/Euro 2.54</td>
<td>.002</td>
<td>.04</td>
<td>-.05</td>
</tr>
<tr>
<td>- £2.50/Euro 3.17</td>
<td>.03</td>
<td>-.01</td>
<td>-.07</td>
</tr>
</tbody>
</table>

Note: For the two clusters the attribute with highest utility is shown in bold. The level of the attribute preferred is shown with a positive sign. Thus a strong flavour with a utility of 0.27 is preferred to a weak flavour. The wider the range from positive to negative the more important is the attribute.
Sensory
The results of sensory analysis of the farmhouse cheeses were as follows:

Trained panel: Three groups of attributes were examined. There were significant differences between the cheeses for appearance, flavour and texture. For appearance, cheeses differed significantly from each other in terms of colour, uniformity and shininess. They were significantly different from each other in terms of 13 of the 21 flavour attributes examined. Cheeses were also significantly different from each other in terms of all the texture attributes examined.

There was no significant sensory difference between the farmhouse and the factory cheeses. For example, while the factory cheeses tended to be more pungent, cheddary, astringent and stronger than the farmhouse cheeses, some individual farmhouse cheeses scored higher on these attributes than the factory cheeses. Similarly, while the factory cheeses tended to be firmer than the farmhouse cheeses, some of the farmhouse cheeses were firmer than the factory cheeses.

The two factory cheeses were significantly different from each other in terms of colour and shininess, flavour and texture.

Naïve Panel: The factory cheeses were preferred to farmhouse cheeses. Older consumers appeared to have a different set of preferences to the younger age group and tended to prefer two cheeses that were rancid, bitter and mouldy and also a different type of cheese with an unusual texture. Perhaps some of the cheeses are an acquired taste. The two most preferred cheeses overall were pasteurised.

Consumers with the same first preference did not have the same last preference and vice versa which implies that consumers rank cheeses for different reasons even when they appear to have similar ranking systems. Some cheeses that are most liked by some consumers are least liked by other consumers indicating that there is a market for most types of cheeses, however, the size of that market is still in question.

Trained and naïve sensory panels combined: There was a lack of discrimination between cheeses by a significant proportion of consumers when sensory
attributes and consumer preferences were combined. This suggests that cheese is not an important food product for some consumers at least.

**CONCLUSION**

It was concluded that farmhouse cheeses were no nearer than factory to the "ideal" cheeses in general. The higher market shares for the ideal products in both segments suggests producers are missing an opportunity and there is scope to produce cheeses which better meet consumer requirements. Generally demand is not price sensitive.

From the sensory analysis it was concluded that each product has distinct characteristics and products differ for various sensory attributes and that distinct differences could not be found between farmhouse and factory cheeses.
HONEY RESULTS

Consumer Analysis

Ideal honey: Three attributes, pure, Irish and a healthy nutritional product, which did not differentiate between honeys in making the purchase decision were identified by the focus groups as very important for consumers of any honey. It was therefore decided to label all analysis profile cards as “pure 100% Irish honey”.

The important differentiating attributes (and their levels) of pure 100% Irish honey were identified as: texture (thick or runny), colour (dark golden or light golden), source (mass produced or made by a small-scale producer), price (£1.95/Euro 2.48, £2.15/Euro 2.73 or £2.45/Euro 3.11), packaging (227 g/8 oz shaped glass jar or 454 g/1 lb plain glass jar). A thick texture had a higher utility than a runny texture. Small-scale production had a higher utility than mass production. A dark golden colour had a higher utility than a light golden colour. Thus the ideal farmhouse honey was priced at £1.95/Euro 2.48 in a 454 g/1 lb plain glass jar, with a thick texture, a dark golden colour and made by a small scale producer.

A selection of Irish honeys.
Conjoint analysis showed that price was regarded as the most important product attribute followed by texture, packaging, scale of production and finally the colour of the honey (Table 3). There was considerable variation in utility between the attributes. A price of £1.95/Euro 2.48 had the highest utility followed in order by £2.15/Euro 2.73 and £2.45/Euro 3.11. This indicates that consumers of honey are price conscious. This is also reflected in consumers’ packaging preference for a larger 454 g plain glass jar instead of a smaller 227 g shaped jar (Table 4).

**Consumer clusters:** Cluster analysis revealed three segments with different ideal product profiles. For Segment 1 (n=17), the most important attribute was scale of production with a higher utility attached to small-scale production as opposed to mass production (Table 3). The second most important attribute was price followed by texture, packaging and finally colour. Its ideal honey was thick textured, dark golden in colour, produced on a small scale and a price of £2.15/Euro 2.73 in a 454 g/1 lb plain glass jar. In relation to price, a price of £2.15/Euro 2.73 had the highest utility followed by £1.95/Euro 2.48 and then £2.45/Euro 3.11 indicating that while this segment is less price sensitive that the aggregate, it is not prepared to pay too high a price either (Table 4). It is interesting to note that members of this segment tended to be younger, often single, and if married to be without children more often than members of the other clusters.

For Segment 2 (n=72), the rank order of importance of attributes was price, texture, scale of production, packaging and finally colour (Table 3). Its ideal

<table>
<thead>
<tr>
<th>Attribute</th>
<th>All 153 consumers</th>
<th>Segment 1 (17 consumers)</th>
<th>Segment 2 (72 consumers)</th>
<th>Segment 3 (64 consumers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texture</td>
<td>24</td>
<td>12</td>
<td>23</td>
<td>29</td>
</tr>
<tr>
<td>Colour</td>
<td>13</td>
<td>12</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Scale of Production</td>
<td>17</td>
<td>49</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Price</td>
<td>26</td>
<td>18</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Packaging</td>
<td>19</td>
<td>10</td>
<td>16</td>
<td>25</td>
</tr>
</tbody>
</table>

The most important attribute is shown in bold and the least important attribute is shown in italics and underlined.
honey was priced at £2.15/Euro 2.73, was a thick textured honey from small-scale production, in a 454 g plain glass jar but with a light golden colour.

For Segment 3 (n=64), the rank order of attributes was texture, price, packaging, colour and scale of production (Table 3). The ‘ideal’ honey was thick in texture, dark golden, mass-produced, £1.95/Euro 2.48 in price and in a 454 g/1 lb plain glass jar. This appears to be the most price sensitive segment and is the only segment that has a higher utility for mass production than small-scale production (Table 4).

None of the honeys used in this analysis corresponded to the ideal honey profile of any of the clusters.

Market share Market share simulations were conducted on the eight products used for the sensory analysis and on the ideal product for each cluster. As expected, each segment predicted the highest market share for its own ideal product. Segment 3 had the highest market-share predictions for factory honeys and was the most price-conscious of all the clusters. All farmhouse honeys had similar market-share predictions, but one of them had high predictions across all three clusters.

### Table 4: Utility scores of honey attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>All 153 consumers</th>
<th>Segment 1 (72 consumers)</th>
<th>Segment 2 (64 consumers)</th>
<th>Segment 3 (64 consumers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thick</td>
<td>0.48</td>
<td>0.37</td>
<td>0.63</td>
<td>0.34</td>
</tr>
<tr>
<td>Runny</td>
<td>-0.48</td>
<td>-0.37</td>
<td>-0.63</td>
<td>-0.34</td>
</tr>
<tr>
<td>Colour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Gold</td>
<td>-0.03</td>
<td>-0.19</td>
<td>0.052</td>
<td>-0.03</td>
</tr>
<tr>
<td>Dark Gold</td>
<td>0.03</td>
<td>0.19</td>
<td>-0.052</td>
<td>0.03</td>
</tr>
<tr>
<td>Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>0.59</td>
<td>2.24</td>
<td>0.37</td>
<td>-0.08</td>
</tr>
<tr>
<td>Mass</td>
<td>-0.59</td>
<td>-2.24</td>
<td>-0.77</td>
<td>0.08</td>
</tr>
<tr>
<td>Price</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>£1.95/Euro 2.48</td>
<td>0.29</td>
<td>0.12</td>
<td>0.71</td>
<td>0.48</td>
</tr>
<tr>
<td>£2.15/Euro 2.73</td>
<td>0.24</td>
<td>0.31</td>
<td>0.45</td>
<td>-0.02</td>
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<tr>
<td>£2.45/Euro 3.11</td>
<td>-0.54</td>
<td>-0.43</td>
<td>-0.63</td>
<td>-0.47</td>
</tr>
<tr>
<td>Packaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227g shaped</td>
<td>-0.63</td>
<td>-0.12</td>
<td>-0.42</td>
<td>-1.02</td>
</tr>
<tr>
<td>£2.15/Euro 2.73</td>
<td>0.63</td>
<td>0.12</td>
<td>0.42</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Note: Segment with highest utility for each attribute shown in bold.
Price sensitivity: In relation to price sensitivity the following were observed:

1. The absolute price range for pure 100% Irish honey was from £0.70/Euro 0.89 to £4 /Euro 5.08. Both below and above these respective prices no consumer was willing to pay. The range of acceptable prices that a producer could charge was from about £1.85/Euro 2.35 to about £2.30/Euro 2.92.

2. The indifference price was seen as £2.05/Euro 2.05 for Pure 100% Irish honey. This was estimated as the “normal” price by forty six per cent of respondents.

Sensory Analysis

**Trained panel:** A panel was recruited, screened and trained specifically to carry out testing on the farmhouse and commercial honey samples. The panel developed a vocabulary of 18 attributes which best described the range of samples. The product attributes were: viscosity, ease of swallowing, colour intensity, natural/characteristic honey odour, brown sugar odour, fresh flowers odour, processed odour, lemon flavour, citrus flavour, caramel/syrup/burnt sugar odour, natural odour, processed odour, spicy odour, sweetness, peppery/hot odour, hot/peppery after-taste, spiciness after-taste and tangy after-taste.

Significant differences between honey samples were observed for viscosity, colour intensity, processed odour (p<0.01), ease of swallowing, brown sugar odour and processed flavour (p<0.05). Natural honey odour, natural flavour and hot/peppery after-taste were not significant.

The commercial samples differed from each other in some of the attributes assessed: viscosity, colour intensity, natural honey odour, brown sugar odour and processed odour. There were no differences between the samples for the remaining sensory attributes assessed.

The farmhouse samples differed from each other in viscosity, ease of swallowing, colour intensity, natural honey odour, processed odour, natural flavour and processed flavour. There were no differences between samples for the remaining attributes assessed.

A naïve panel was not used for honey.
CONCLUSION

The consumer analysis showed that farmhouse honeys were no nearer the ideal than commercial honeys in general. The higher market shares for the ideal products in each consumer segment suggests there is scope to produce honeys which better meet consumer requirements. The results show which attributes are most valued and which, if changed, would result in the greatest increase in satisfaction. Generally honey was price sensitive.

The sensory analysis found there is considerable difference between brands. However, these were not due to farmhouse or commercial manufacture.

COMPARING FARMHOUSE CHEESE AND HONEY

Consumers of farmhouse products are not a homogenous group. Cluster analysis revealed there were two segments with different ‘ideal’ farmhouse cheese profiles while for honey there were three such segments. Scope exists to improve the utility of the various products studied. For example, texture was ranked second following price for honey consumers while it was ranked last of 8 attributes for farmhouse cheese consumers. This suggests honey producers should examine ways to improve texture.

Consumers think in terms of both the highest and lowest price they are willing to pay. Thus when producers set their price, they must take care not to set it at the lowest price they can profitably set it at. They need to take account of the fact that consumers trade off price and quality and see cheap products as being of inferior quality. Thus the study suggests farmers may be losing an opportunity to sell at a higher price in the case of cheese but not in the case of honey.

For two relatively homogenous products (cheddar-type cheese and honey), consumers could distinguish well between different products on sensory aspects. They did not however distinguish between mass produced (factory) and farmhouse/small-scale products.
OVERALL CONCLUSION

Farmhouse foods are not distinctively different from their industrial equivalents in terms of sensory aspects. However, some consumers value them for other attributes, notably scale of production and quality as reflected in the price.

ACKNOWLEDGEMENTS

This project could not have been completed without the help of the following groups of people:

- Irish Farmhouse Cheese Producers;
- The Federation of Irish Beekeepers’ Associations;
- Many multiple and independent food retailers;
- The consumers interviewed.

The authors thank them all for their assistance. Thanks are also due to Thérèse Gilligan and Anne Flynn for technical assistance.
PUBLICATIONS FROM THIS PROJECT


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