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# Attitudes towards, and purchasing of, Scottish beef and beef products in Scotland – A short communication

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ABSTRACT

Attitudes and preferences of the main shopper in households (n = 203) across Scotland towards beef and beef products that were produced in Scotland were assessed by questionnaire. Consumer panel purchase data from the preceding six-months were collected for those households by Kantar Worldpanel. Beef products from Scotland accounted for 39% (by value) of all beef purchases, with an additional 46% from Great Britain and 9% from Ireland. Participants tended to report that being locally produced was an important factor when they bought beef and beef products, although this was not reflected in higher proportions of these products being purchased. Participants who rated local production of higher importance did not buy a higher proportion of beef from Scotland than did participants who rated it as less important (41% and 37% respectively, $P = 0.448$). Stated preferences for locally produced beef and beef products are not translated into higher amounts purchased.

## 1. Introduction

Consumers are unable to determine the true quality of an unfamiliar product at the point of purchase and rely instead on quality cues when choosing between similar products (Grunert 2006). For products such as fresh meat these can include intrinsic cues, such as the colour of the meat, and extrinsic cues such as the size of the retailer or product brand (Grunert 2006). One important extrinsic cue is country of origin from which inferences are made about food safety (Lobb & Mazzocchi 2007) and quality (Loureiro & Umberger 2007). It is often reported that meat of domestic origin is considered "better" than imported meat by consumers (Grunert 2006), and region of origin has been reported as being the most important influence on consumers' attitudes towards beef meat (Mennecke, Townsend, Hayes, & Lonergan 2007).

Attitudes towards meat are thought to be important in making purchasing decisions, but these do not always translate into purchasing behaviours (Font-I-Furnols & Guerrero 2014). Routinely collected consumer purchase data, such as that collected by Kantar Worldpanel (KWP), offers insights into the relationships between consumers' attitudes and beliefs and their purchasing behaviours.

This study aimed to look at the relationship between attitudes, beliefs and intentions towards Scottish beef and purchases thereof in a sample of consumers across Scotland.

## 2. Methods

### 2.1. Study design and sampling

The study consisted of a survey of consumers' attitudes towards buying locally produced beef and beef products, which were linked to retrospective purchases of beef and beef products.

Purchase information was taken from continuous household consumer purchase data collected routinely by KWP. UK census data and the Broadcasters' Audience Research Panel Establishment Survey were used by KWP to define and predict demographic targets and to monitor the national representativeness of KWP. Respondents were recruited from the consumer panel of KWP, who routinely report food and drink purchases that are brought into the home for periods of months to many years. Approximately 75% of KWP's 3000 households in Scotland are available to complete additional questionnaires through KWP's LinkQ service. Inclusion criteria for this study were; households that had been active in the panel for at least six months prior to the study, and that had made at least seven purchases of beef products during that time. The main shopper in all households that met the inclusion criteria was invited to participate in the study, and recruitment continued until at least 200 respondents had completed the questionnaire.

The study was approved by the Rowett Institute Ethics Panel. Participants had previously agreed to being contacted about participating in additional data collection. All data were anonymized by KWP.

Two hundred and three respondents completed the questionnaire.

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**Table 1**
Responses to the question "Please rank the following in order of how important they are to you when buying beef."

| | Rank | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| It is locally sourced/produced | 42 (20.7%) | 31 (15.3%) | 22 (10.8%) | 26 (12.8%) | 19 (9.4%) | 25 (12.3%) | 29 (14.3%) | 9 (4.4%) |
| It is on promotion | 10 (4.9%) | 10 (4.9%) | 19 (9.4%) | 21 (10.3%) | 19 (9.4%) | 28 (13.8%) | 36 (17.7%) | 60 (29.6%) |
| It is being sold at a good price | 32 (15.8%) | 48 (23.6%) | 27 (13.3%) | 32 (15.8%) | 25 (12.3%) | 24 (11.8%) | 12 (5.9%) | 3 (1.5%) |
| It is a brand I know and trust | 14 (6.9%) | 14 (6.9%) | 28 (13.8%) | 35 (17.2%) | 32 (15.8%) | 25 (12.3%) | 24 (11.8%) | 31 (15.3%) |
| I know it is a high quality product | 57 (28.1%) | 39 (19.2%) | 37 (18.2%) | 18 (8.9%) | 27 (13.3%) | 15 (7.4%) | 4 (2%) | 6 (3%) |
| It has high nutritional value | 9 (4.4%) | 12 (5.9%) | 25 (12.3%) | 30 (14.8%) | 26 (12.8%) | 41 (20.2%) | 40 (19.7%) | 20 (9.9%) |
| It is ethically produced | 8 (3.9%) | 11 (5.4%) | 13 (6.4%) | 17 (8.4%) | 30 (14.8%) | 27 (13.3%) | 43 (21.2%) | 54 (26.6%) |
| The pack size is suitable for the meal I have in mind | 31 (15.3%) | 38 (18.7%) | 32 (15.8%) | 24 (11.8%) | 25 (12.3%) | 18 (8.9%) | 15 (7.4%) | 20 (9.9%) |

Values are the number and proportion (%) of respondents that rank each statement e.g. 42 (20.7%) respondents ranked "It is locally sourced/produced" as most important.

Mean age of the main shopper was 54.5 years (SD ± 12.1), and 81% were female.

### 2.2. Questionnaire

The survey was designed to obtain information about consumers' attitudes towards buying local beef, which was defined as any product that could be bought in a store and that had been produced in Scotland. Respondents were told that this included steaks, stewing steaks, roasting beef, mince, burgers and meatballs as well as all fresh, frozen and ready cooked products. The questionnaire was completed online during January 2017.

Questions were primarily themed around areas previously reported as important in consumers' purchasing decisions. These were, that the product was locally sourced (Realini et al. 2013), cost, quality (Davidson, Schröder, & Bower 2003), animal welfare (DEFRA 2011) and convenience. Participants were asked to rank, in order of importance to them when buying beef, whether the beef was; locally produced, on promotion, sold at a good price, a brand they knew and trusted, was a high quality product, had a high nutritional value, was ethically produced, and whether the pack size was suitable for the meal they had in mind.

Further questions considered the relative importance of local production for the purchasing of different types of beef product. Participants were then asked how important it was to them that fresh and frozen cuts of beef, beef mince, ready meals and other beef products were produced in Scotland. Response options were (1) not important at all, (2) somewhat important, (3) very important with a further option if they never bought a particular group of products.

Further questions relating to motivation for buying Scottish beef, and buying more Scottish beef, as well as cost and the economy, and health and environmental considerations were included. A summary of the responses are available in the online supplementary information, but are not reported here.

### 2.3. Purchase data

KWP members scan till receipts and product bar codes of purchases of foods and drinks that are brought into the home. Other items (such as dining out) were not recorded for this study. Information on each purchase includes; a description of the item, weight or volume, price paid, any price or volume promotional discounts applied, date and place of purchase. Country of origin information is also included for many product groups, including meat and meat products. Any new product reported by households is linked by KWP through its barcode to the country of origin, which is obtained from the product's label. Retailers recycle barcodes, and in some cases the same barcode may be used for a product that has two different countries of origin. Country of origin information is checked and updated, by KWP, for the top selling 150 selling products at least every four-weeks.

Households report non-barcoded items, such as fresh foods including some raw meat products, by way of a booklet issued by KWP to their panel members containing generic barcodes with photographs and questions to help in identifying products (Leicester 2015; Ni Mhurchu et al. 2011). Not all panel members are required by KWP to record non-barcoded items. Country of origin information may not be captured by KWP for some non-barcoded items, in which case it was coded as "other country/not stated".

Purchases that were reported during the six months prior to the questionnaire being completed were included in the analyses.

### 2.4. Statistical analysis

Tests for significance of differences were performed using *t*-tests and ANOVA, and were conducted using SPSS Version 24 (SPSS/IBM Corp, Armonk, New York, NY).

## 3. Results

From the purchase data, households recorded a mean of 16.5 (SD ± 11.5) separate purchases of beef products over the preceding six-months. The mean expenditure was £1.21 (SD ± 1.04) and the mean amount bought was 149 g (SD ± 124) per person per week. The greatest proportion of weekly spending on all beef and beef products was on fresh beef cuts (64%, £1.72 per household per week) followed by fresh beef mince (31%, £0.84), pre-cooked beef (5%, £0.13) with frozen beef cuts and frozen beef mince each making up less than 0.5%.

Purchases of beef and beef products were almost exclusively from Scotland (39%), Ireland (9%) and Great Britain (46%), with the latter possibly including some products originating in Scotland but only identified as British. Only 6% of recorded purchases originated in other, or not identified countries.

Quality of the product was important, with 47% of respondents ranking "knowing that it was a high quality product" first or second for importance (Table 1).

That the beef was locally sourced/produced was also important,