

CONSUMER ATTITUDES TOWARDS ECO LABELING – THE CASE OF MEAT PRODUCTS

Carola Grebitus¹, Bodo Steiner² and Michele Veeman³

¹ University of Bonn, Institute for Food and Resource Economics, Nussallee 21, 53115 Bonn, Germany

² University College Cork, Food and Business Development, Cork, Ireland

³ University of Alberta, Resource Economics and Environmental Sociology, Edmonton, Alberta, Canada

Abstract – This paper deals with consumers' attitudes towards eco labeling as related to their ground beef purchase frequency. Meat products generate high levels of carbon emission equivalents. Hence, it is expected that heavy meat consumers may be less sensitive towards climate friendly behavior and may show less interest in eco labeling. Results show that this is not true for self-reported behavior such as indicating propensity to shop for climate friendly products. However, heavy meat consumers are less often members of / donors to groups that support the environment. When it comes to attitudes towards eco labeling there are no differences between frequent and less frequent ground beef shoppers to report from the analyses.

Key Words – ground beef, perception, purchase behavior

I. INTRODUCTION

Concerns regarding global warming are undeniable (1). For example, in Germany 40% of all climate relevant emissions are caused by dietary patterns and private consumption (2). Hence, focusing on environmentally sustainable foods is of interest. The problem is that even environmentally conscious consumers can adjust their consumption patterns only if they can identify ecologically sustainable products.

Products can be identified by means of labels. Regarding sustainability, Rees (1992) developed a “nutrition label for the planet”, the so-called ecological footprint concept. The ecological footprint concept includes the carbon footprint and the water footprint. Those footprints account for the amount of CO₂ created (carbon footprint) and the amount of water used (water footprint) during food production, processing, storage, packaging and distribution.

In recent years, some countries have established pilot projects to encourage reduction of carbon emissions through product labeling. Among them are the Carbon Trust in the UK, Carbon Counted in Canada and the Product Carbon Footprint in Germany. The food retailer Tesco in the UK introduced a carbon footprint label in 2008 but stepped back from this in 2012. In other countries, including Canada, such labels have been slow to move into the marketplace (e.g. 4)

Against this background this study aims to analyze consumers' attitudes regarding groceries labeled with ecological footprints and to segment consumers based on their meat purchasing frequency. The objective is to answer the question of whether consumers are in favor of groceries labeled with ecological footprints and if so, whether this depends on their meat purchasing frequency. We focus on meat shoppers, because meat products are characterized with higher carbon emission equivalents than other food products such as produce. Hence, we hypothesize that the higher the meat consumption/purchase frequency the lower the interest in eco-friendly behavior and labels that indicate eco-friendly products.

The contribution of this study lies in the economic assessment of the relationship between consumers' attitudes and preferences for eco labeling of meat products. There is a need to evaluate interest in eco labeling and to weigh this regarding meat consumption. Overall, the aim is to provide the industry and policy decision makers with an indicator of consumer attitudes towards eco labeling focusing on meat products.

II. MATERIALS AND METHODS

An online consumer survey was conducted in Canada in 2011. Questions regarded purchase frequency of ground beef measured as one or more times a week; every two weeks; once a month; less than once a month and never. To understand consumers' behavior we asked whether they had, during the past four weeks, purchased any grocery products because they were recognized to be climate friendly or not. Also, respondents were asked whether they are a member of a group that supports the environment and whether they had donated to a group or supported a cause that supports the environment, in the past year. Furthermore, participants were asked more specifically whether they had ever seen a carbon or water footprint label before participating in the survey. Finally, interviewees had to state their opinions on different statements to allow the evaluation of their attitudes. For each statement, they had to indicate on a five-point scale whether they strongly agree (5) or strongly disagree (1).

III. RESULTS AND DISCUSSION

1551 English speaking participants were interviewed, of which 52% were female, the average age was 48 years, ranging from 18 to 82; the average household size was 2.5 ranging from 1 to 9; 20% of the households included children; 10% of the households included graduate students and 6% of the households included undergraduate students.

Results show that 17.6% of the sample purchased ground beef one or more times a week, 32.9% shopped for it every two weeks, 25.5% bought it once a month, 17.7% purchased it less than once a month and 6.4% never buy it.

In the following we analyze consumers' ground beef purchase behavior based on their socio-demographic characteristics. Results show that men are heavier consumers of ground beef than women. The older the consumer, the lower the ground beef consumption, although on average, the youngest participants were in the 'never' category. Those with kids in the households were either heavy ground beef shoppers or did not purchase ground beef at all.

Table 1 Socio-demographic characteristics of ground beef shoppers

	Never	Less than 1x month	1x month	Every 2 weeks	1 or more times a week
Female	53%	54%	59%	48%	48%
Age	43	51	49	47	46
Household size	3	2	2	3	3
Kids in the household	26%	12%	13%	24%	28%

Table 2 displays differences in eco-friendly behavior of ground beef shoppers. Heavy ground beef shoppers as well as those who never purchase ground beef indicate most often that they shop paying attention to climate friendly labels. Also, they pay most attention to the water footprint. This does not hold for the carbon footprint, which was perceived to be important mostly by those who shop for ground beef once a month or less than once a month. Those who are either a member of a group supporting the environment or donate to a group that supports the environment are mainly in the category of non-ground beef shoppers.

Table 2 Eco friendly behaviour of ground beef shoppers

	Never	Less than 1x month	1x month	Every 2 weeks	1 or more times a week
Shop climate friendly	21%	12%	18%	15%	20%
Seen carbon footprint before	27%	33%	30%	25%	25%
Seen water footprint before	15%	10%	8%	9%	15%
Member of environment supporting group	25%	10%	12%	9%	14%
Donating to eco group	32%	23%	28%	25%	27%

Table 3 shows consumers' attitudes towards eco labeling based on their purchase frequency. For each statement, participants had to indicate on a five-point scale whether they strongly agree (5) or strongly disagree (1). Results are displayed as

means for the respective purchase frequency. It becomes evident that, overall, consumers think that each product should carry a label that shows the location of production. Therewith, origin is more important as compared to eco labels in general. However, origin can be used as a proxy for distance of transportation which by itself is related to sustainability. Furthermore, consumers think that there should be more climate friendly products available for purchase and each product should carry an eco-label. Consumers would also prefer that more specific labels such as labels on greenhouse gas emissions or the carbon footprint were implemented. However, when it comes to availability they don't think that it is easy to find climate friendly products when shopping for groceries.

Regarding segmentation of ground beef shoppers, results show that there is not much variation between the different groups. Based on this analysis consumers' attitudes towards eco labels are not dependent on the ground beef purchase frequency.

Table 3 Attitudes of ground beef shoppers

	Less than 1x Never	1x month	Every 2 month	Every 2 weeks	1 or more times a week
Each product should carry a label that shows location of production.	4.2	4.2	4.2	4.1	4.1
There should be more climate friendly products available for purchase.	3.9	3.8	3.9	3.8	3.8
Each product should carry an eco-label.	3.6	3.5	3.6	3.5	3.6
Each product should carry a label that indicates greenhouse gas emissions of the product.	3.5	3.4	3.4	3.3	3.5
I want a carbon footprint label on all products.	3.5	3.3	3.4	3.3	3.5
It is very easy to find climate friendly products when I shop for groceries.	2.4	2.2	2.3	2.3	2.4

IV. CONCLUSION

The analysis in this paper describes differences in consumers' interest in eco labeling as well as their eco-friendly behavior based on ground beef purchasing frequencies. Results reveal that there exist differences in behavior and purchase intentions for climate friendly products. However, the attitudes towards eco labeling per se do not depend on whether someone purchases ground beef very often or rarely.

Results can be used to develop target oriented marketing strategies towards consumers that might be more prone towards sustainable behavior than others enabling them to act more sustainable.

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