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MEAT WASTE IN THE CANADIAN HOUSEHOLD

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I. INTRODUCTION

Food waste has reached an inflection point from an inevitable consequence of affluence and privilege, particularly in developed countries, to a priority for reduction reflecting economic, financial, environmental and humanitarian concerns. It has been estimated that Canadians waste 170 kg of food per capita per year at the consumer level (including both food eaten at home and away from home) [1]. Indeed, it is reported that in Canada, households account for about 15% of total and 16% of avoidable food waste along the value chain, second only to the processing and manufacturing sector [2]. Given that meat is the most expensive item in the food basket for the majority of Canadians, does meat significantly contribute to these alarming food waste statistics? The aim of this study was to determine Canadian consumers behaviour in terms of discarding meat and meat products.

II. MATERIALS AND METHODS

Canadian consumers primarily responsible for household grocery and meal planning were invited to participate in an online survey on meat-wasting behaviour. The sample was constructed to ensure a broad representation of Canadian households across multiple demographic and socioeconomic dimensions, including sex, age, income, marital status and household size (Table 1). A total of 2018 responses were obtained between August and September, 2024.

The questionnaire was exploratory in nature since it was neither based on hypotheses nor embedded in a theoretical economic or attitudinal framework. The survey comprised meat-focused questions on meal planning, purchasing, preparation, discarding, storage, sharing and attitudes to waste. Frequency data of the behaviour of discarding meat and meat products is presented here. Odds ratios using 95% confidence intervals were calculated to compare uncooked and cooked meats. The terms ‘cooked’ and ‘uncooked’ were defined as meat and meat products that the consumer had or had not cooked, respectively.

Table 1. Select demographic and socioeconomic characteristics of the consumer sample.

Question item	Response options	Consumers (%)
Sex	Female	50
	Male	50
Age (years)	18-30	25
	31-50	26
	51-65	25
	>65	25
Household income (CAD)	<20,000	6
	20,000-49,999	24
	50,000-99,999	37
	100,000-149,999	21
	≥150,000	12
Marital status	Single/widowed	43
	Married/cohabiting	57
Household size	1	23
	2	42
	3	17
	4	13
	>4	6

III. RESULTS AND DISCUSSION

Most respondents (75-79%) reported that they never or rarely throw away uncooked meat, whether it is fresh, processed, or frozen (Figure 1a). Up to 20% of respondents stated discarding meat at least “sometimes”, indicating that there is measurable waste and room for improvement in handling, storage, and consumption practices. Data revealed differing behaviour depending on product type. Fresh meat appeared to be wasted the least, with 46% of respondents indicating “never” discarding and 33% stating “rarely”. In contrast, only 37% of respondents reported

"never" or "rarely" discarding meat products, while 18% reported doing so "sometimes". The higher incidence of waste in processed forms may be due to packaging sizes and a higher prevalence of spoilage, which have been identified as known causes of food waste [2,3]. Compared to the non-frozen meats, uncooked frozen meat exhibited similar proportions of respondents reporting "never" or "rarely" discarding, suggesting that freezing is an effective strategy for extending shelf life and minimizing waste.

Odds ratios indicated that waste was 15-35% more frequent in cooked meats than the uncooked counterparts. These findings were evidenced by an overall increase in "sometimes" responses (18%-20% vs 14-18%, respectively) and a decrease in "never" and "rarely" responses (33%-39% vs 37%-46%, respectively) (Figure 1b). Cooked fresh meat and meat products also demonstrated higher waste levels than cooked frozen meat. This pattern suggests that leftover management and portion control issues may contribute to increased waste observed in cooked meat. These findings align with a UK study that reported fresh food is wasted 47% more than frozen food [4].

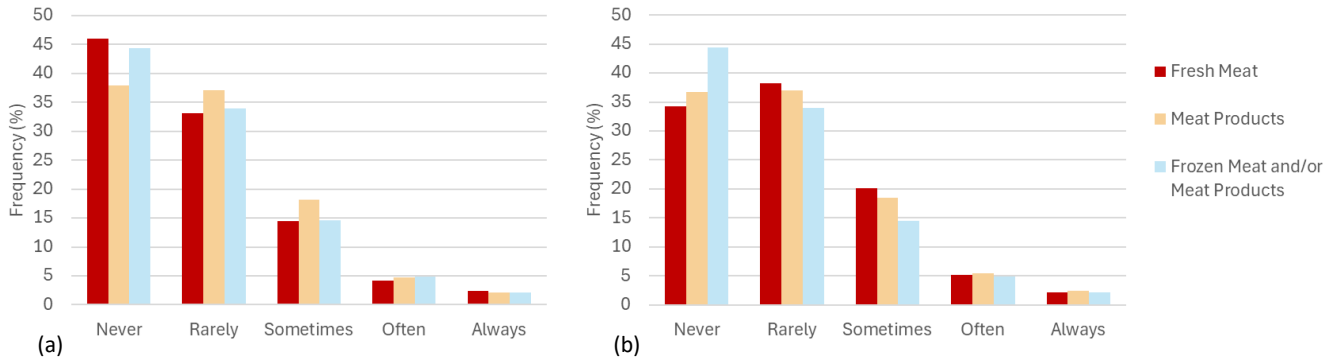


Figure 1. The frequency (a) uncooked and (b) cooked (b) meat is discarded in households across Canada (consumer responses, n=2018).

IV. CONCLUSION

Although meat waste among Canadian consumers was relatively low overall, there is potential for improvement, particularly among the consumers who report discarding meat "sometimes." Understanding how consumers handle meat leftovers and the reasons meat is discarded is crucial to developing reduction or mitigation strategies.

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