Red Meat / Beef Consumption in Canada - Backgrounder

Red meat consumption data is used in communications with health professionals, influencers and in submissions to government on food and nutrition policy. Per capita consumption is a key performance measure used by the red meat industry to evaluate effectiveness of programs and consumer demand. The purpose of this backgrounder is to summarize the different types of data and provide recommendations on what to use in various contexts.

MEAT CONSUMPTION DATA SOURCES

Statistics Canada has two data sources for quantifying Canadians' meat consumption:
1. **Canadian Community Health Survey (CCHS) – Nutrition Data**
2. **Food Availability Data** (formerly Disappearance Data)

NOTE: A concern with the CCHS-Nutrition surveys is their datedness. Consumption patterns have changed since the last survey was conducted, and including a 2015 reference in resources can make the asset appear dated. Nonetheless, despite these shortcomings, CCHS-Nutrition remains the database used by Health Canada and nutrition researchers and, consequently, by Canada Beef in communications about red meat consumption with these audiences.

1. **Canadian Community Health Survey (CCHS) – Nutrition Data[1]**
   The CCHS-Nutrition surveys used 24-hour dietary recalls to estimate Canadians' usual intake of nutrients from foods, food groups, and eating patterns. CCHS-Nutrition data is used by Health Canada in developing food and nutrition policies, for example, the development of Canada's Food Guide and front-of-pack nutrition labelling, and by academics for publishing research on the quality of the Canadian diet.

   To date, the survey has been conducted twice: *2004 CCHS-Nutrition (Cycle 2.2)* and *2015 CCHS-Nutrition*. The surveys included a nationally representative sample of Canadians 1+ years of age from all provinces (excluding the territories), with sample sizes of 33,924 (2004) and 20,080 (2015). The data has been categorized by age, gender, province, and by foods.

   In 2017 and 2018, the Canadian Meat Council requested customized analysis of the CCHS-Nutrition survey data to quantify how much red meat (fresh and processed) Canadians consumed, on average. The initial analysis was done in 2017, and saturated fat analysis was added in 2018. This information has been shared with Canada Beef and has been used in industry nutrition communications. The customized analysis provides insight into Canadian intakes (for the population aged 1+ and 19+, males, females and both sexes) of fresh and processed red meat in grams as well, as the contribution of red meat to Canadians' intakes of:
   - Calories
   - Protein
   - Total fat
   - Saturated fat

Definitions - Statistics Canada defined the categories as follows for this customized analysis:

Fresh red meat (i.e., unprocessed) included any beef, veal, pork or lamb, including ground meat and burgers. (Note: This category did not include game meats or organ meats.)

Processed red meat included salted beef, bacon (but not turkey or chicken bacon), ham, sausages (not turkey or meatless), and luncheon meats (not considered poultry).

Referencing - Canada Beef has decided to reference the customized analysis as follows:

For 2015 data only: Statistics Canada. 2018. Customized analysis of 2015 Canadian Community Health Survey – Nutrition data.

For 2015 & 2004 data: Statistics Canada. 2018. Customized analysis of 2015 and 2004 Canadian Community Health Survey – Nutrition data.

Red Meat Consumed per Day - 2004 and 2015 CCHS
(mean gram weight by Canadians ages 1 year or older)

	2004			2015		
	Both sexes	Males	Females	Both sexes	Males	Females
Fresh red meat	53.5	68.6	38.6	41.1	52.3	30.3
Processed red meat	21.9	27.9	16.1	19.9	26.5	13.5
TOTAL	**75.4**	96.5	54.7	**61.0**	78.8	43.8

*Note: Statistics Canada advised that caution should be used in comparing 2015 to 2004 data due to methodological differences between the CCHS surveys. Differences in the Canadian Nutrient File (CNF) food codes and documented under-reporting in 2015 may account for up to a 12 g bias in intake.

Additional Analysis of **2015** CCHS-Nutrition Data for Canada

Canadian Population (both sexes)	1+ Years	Adults 19+ Years
Fresh red meat intake (mean g/day)	41.1	44.0
Processed red meat intake (mean g/day)	19.9	19.9
Calories from fresh red meat (% of total)	4.90	5.21
Total fat from fresh red meat (% of total)	7.17	7.59
Saturated fat from fresh red meat (% of total)	8.56	9.16
Protein from fresh red meat (% of total)	12.94	13.72

2. Food Availability Data[2] (formerly Disappearance Data)

Food availability tables represent the total food available for human consumption from the Canadian food supply chain. It does not, however, equate to total food consumed in Canada. Rather, food availability tables can be used as a general indicator or proxy for consumption – i.e., if availability of a certain food is growing over time, we can deduce that the demand/consumption of this product is also growing.

Meat availability data is estimated by calculation:[3]

Total supply (inventory of meat at the beginning of the year + production + imports)
- – outputs (exports, waste, and inventory of meat at the end of the year)
- = net supply
- ÷ Canadian population (as of July 1st of the reference year)
- = Carcass weight of meat available per person (in that given year)

In addition to carcass weight, the food available per person is presented as:
a) Retail weight –The most commonly used per capita consumption number reported for red meat is in retail weight. It is calculated on the portion of the carcass that is available for consumption after removing the skin and trimmed fat. The conversion factor prepared by Agriculture and Agri-Food Canada (Animal Industry Division - Market Information Section) for carcass to retail weight is 73%.[4]
b) Boneless weight – Calculated on the portion of the retail weight after removing bone. It is the number used to calculate availability after adjusting for losses. Canfax provides Statistics Canada annually the conversion factor from retail to boneless weight.
c) Adjusted for losses – The beef availability data overstates actual consumption, so an adjustment is made for cooking loss and uneaten food to provide a proxy of fork-level consumption based on food supply data. Statistics Canada makes the calculation on boneless weight applying a loss factor of 23.44%. Food available adjusted for losses is found at 32-10-0054.

The following chart shows the different permutations of the data.

Beef Available in Canada
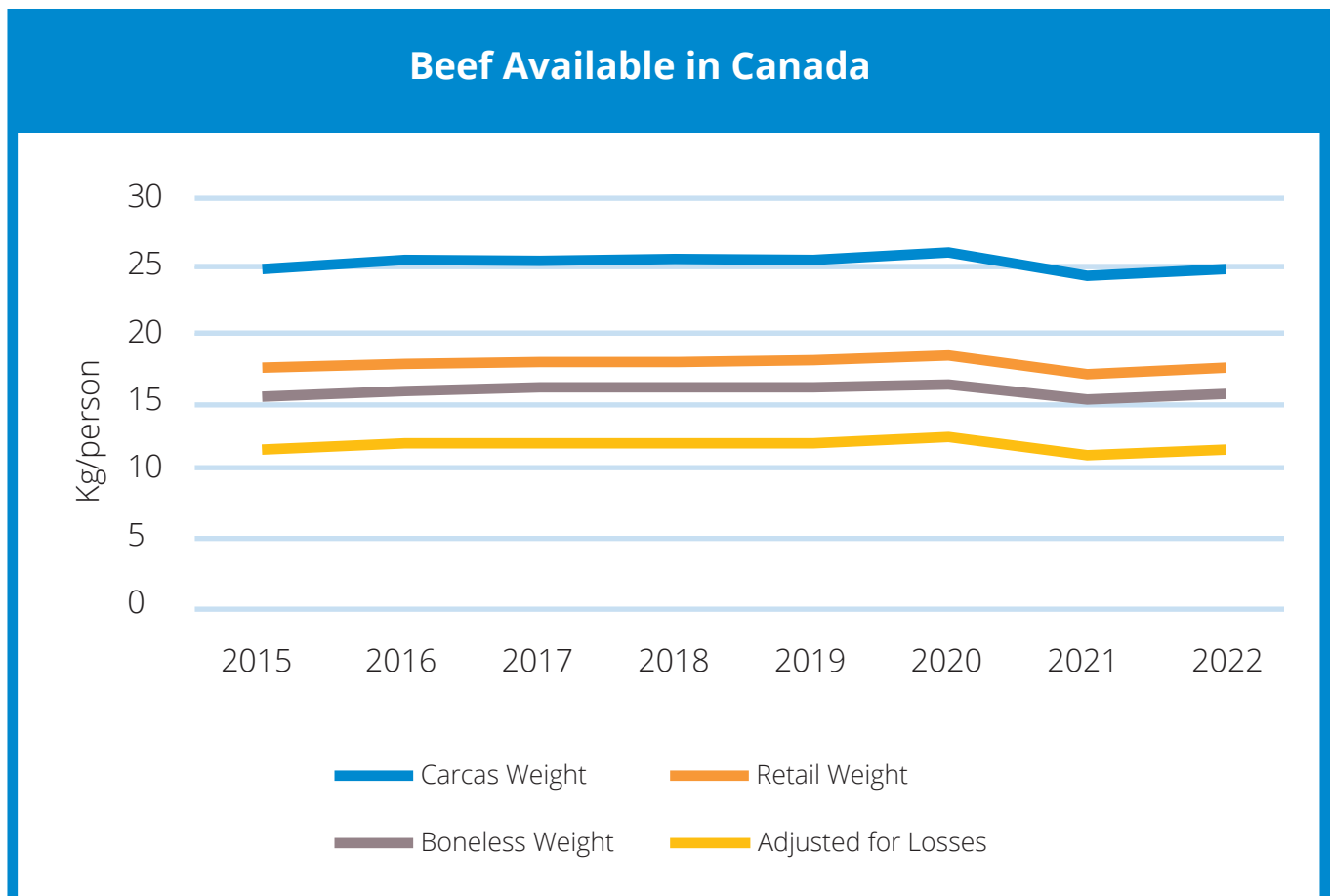
Source: Statistics Canada[2,5]

Comparing Meat Consumption Data Sources
The following table shows how the numbers compare using food availability and CCHS survey data. The year 2015 was chosen; the last year a CCHS survey was conducted.

Comparing Food Availability & Canadian Community Health Survey-Nutrition – 2015 Data			
Data Description	Average daily grams per person (calculated for backgrounder)		Notes
Beef carcass weight (24.42 kg/person/year)	67		• Doesn't reflect consumption since the inedible portions of the carcass and hide are included
Beef retail weight (17.29 kg/person/year)	47		• Raw weight and bones are included such as a standing rib roast or T-bone steak
Beef boneless weight equivalent (15.43 kg/person/year)	42		• Raw weight with bones excluded
Beef adjusted for losses (11.81 kg/person/year)	32		• Cooked weight • Includes fresh and processed beef • Best estimate of consumption
CCHS, fresh red meat	41.1	30.3 females 52.3 males	• Cooked weight • Includes fresh beef, veal, pork and lamb
CCHS, processed red meat	19.9	13.3 females 26.5 males	• Cooked weight • Includes processed beef, veal, pork and lamb
CCHS, total red meat	61.0	40.8 females 78.8 males	• Cooked weight • Includes fresh and processed beef, veal, pork and lamb

The 2015 'adjusted for losses' data (32 g/person) aligns fairly well with the 2015 CCHS data (61 g/person) based on the estimate of beef being around 50% of total red meat consumption; pork, veal, and lamb the remaining half.

Estimating Fresh Beef Consumption
Statistic Canada's 'adjusted for losses' data provides a best estimate of how much beef (fresh and processed) Canadians consume in a given year. To estimate fresh beef consumption, according to channel marketing staff at Canada Beef, the proportion of 90:10 for fresh to processed beef can be assumed.

Therefore, in 2020, for example:
> Beef available adjusted for losses: 12.47 kg per person
> 90% estimated to be fresh beef: 11.2 kg per person

Beef Availability Adjusted for Losses
The following chart provides Statistic Canada's beef availability per year and with calculations for availability per week and per day.

Referencing - Canada Beef has decided to reference Beef Availability Data as follows (example shown is for 2020):
> Statistics Canada. 2020. Beef availability adjusted for losses. Grams per person per day calculated from annual value.

Beef Availability Adjusted for Losses

Year	Kg/person/year[2]	Grams/person/week[6]	Grams/person/day[6]	Notes
2015	11.81	227	32	
2016	12.20	234	33	
2017	12.31	237	34	
2018	12.30	237	34	
2019	12.26	236	34	
2020	12.47	240	34	COVID
2021	11.55	222	32	COVID
2022	11.89	229	33	
2023				

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References

1   Statistics Canada. Canadian Community Health Survey - Nutrition (CCHS). https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=201486
2   Statistics Canada. Food available in Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210005401
3   Statistics Canada. Food supply and disposition. https://www.statcan.gc.ca/en/statistical-programs/document/3475_D1_V7
4   Agriculture and Agri-Food Canada. Red meat sector conversion factors.
    https://agriculture.canada.ca/en/sector/animal-industry/red-meat-and-livestock-market-information/slaughter-and-carcass-weights/conversion-factors#details-panel2
5   Statistics Canada. Protein disappearance and demand by species. https://agriculture.canada.ca/en/sector/animal-industry/red-meat-and-livestock-market-information/protein-disappearance-and-demand-species
6   Canada Beef calculation of Statistics Canada data.

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