

Meal Calculator

Summary of Development and Build

About Second Harvest

Second Harvest is a registered national charity and thought leader in the food rescue and recovery sphere. Over the past 35 years, Second Harvest has diverted millions of pounds of good, surplus food from landfills, redirecting this food to social services agencies across Canada. Through our fleet & warehouse operations, and the Second Harvest Food Rescue App, we continue to work towards our vision of No Waste. No Hunger.

Communicating Impacts of Food Rescue

At present, Second Harvest uses the metric 1 lb. = 1 meal (OPOM). This metric was first introduced in Food Banks Canada's report, Developing a "meals metric" for Canadian food banks (2015). This metric took data from the Canadian Community Health Survey – Nutrition (CCHS-N), collected by Stats Canada in 2004. Data from nationwide 24-hour recalls, a validated tool to assess overall eating patterns, were analyzed to calculate the weight of an average meal, which came out to 453 g (or approximately 1 lb.).

Logic and Methods

Our team pulled "All-Person-Consumption-Intake-g-per-person-Mean" (denoted as "g per person"), which best represents average daily consumption on a population level, for the following categories from CCHS-N 2015 as shown in Table 1: grain, dairy, fats, meat, meat alternatives, vegetable, fruit, miscellaneous and beverage. The daily weight was then divided among 3 average meals and converted to lbs. Given the rigor of the methodology for CCHS, and the exclusion of specific food categories, we did not weight these numbers at the population level. Our methods were reviewed and validated by Dr. Hassan Vatanparast's lab at the University of Saskatchewan.

Assumptions made in this calculation (what defines a meal):

- Sugars, other sugars, sugar substitutes were removed from the Miscellaneous category. These foods were considered as food additives or seasoning, and not part of a meal
- Water, tea, and coffee were excluded from the Beverages category. These items are typically included with or without a meal, but do not constitute part of a meal
- All foods consumed over 24 hours were slotted into one of 3 meals to reflect an overall eating pattern
- This metric is specific to Second Harvest and not validated for use outside our food rescue operations

Table 1: Average Daily Consumption per Person by Food Group

Food Group	g per person
Grain Products	204.8229307
Dairy Products	270.5149978
Fats	17.21731959
Meat Products	124.1522152
Meat Alternative Products	46.87992379
Vegetable Products	202.4091377
Fruit Products	152.5233886
Miscellaneous	85.61556955
Beverages	222.228456

Calculation of meal per lb metric:

Sum (g per Canadian daily) = 1326.363 g

$$\text{Sum (lb)} = \frac{\text{Sum g}}{453.592 \frac{\text{g}}{\text{lb}}} = 2.92313 \text{ lb}$$

$$\text{Sum (lb)} / 3 \text{ meals} = 0.974711 \text{ lb/meal}$$

$$\text{lb/meal}^{-1} = 1.02594 \text{ meal/lb} \approx \mathbf{1 \text{ meal per 1 lb}}$$

Summary

Based on the most recently updated national data on Canadian eating patterns (CCHS-N 2015), the OPOM impact metric (1 lb = 1 meal) remains a valid metric to communicate the impact of rescued or donated food at Second Harvest and the food rescue space.

References

1 “Food Consumption Table (2015 CCHS Nutrition) -Datasets and Instructions.” Open Government Portal, Statistics Canada, 30 May 2019, open.canada.ca/data/en/dataset/a9c18c37-b7b9-48ce-ac1d-b40a65bafa9e/resource/e5834186-0e98-4dc0-9830-a94cb5006ed9.