

VSB Secondary Pro-D

Finding Purpose in the Age of Climate Crisis

Food and Environment: Classroom Activities for Awareness and Action

Eleanor Boyle, PhD Educator and Writer

eleanorboyle.com / eleanorboyle@gmail.com

April 24, 2023



THE SCOTTISH WAR SAVINGS COMMITTEE
25 PALMERSTON PLACE, EDINBURGH

VICTORY IS IN THE KITCHEN

DESIGN BY MICHAEL HARRIS FOR THE WAR SAVINGS COMMITTEE

QUESTION FOR QUICK DISCUSSION:

No matter where you live in the world now, you can often get fresh fruits like pineapple and strawberries, even in January.

- What's good about that?
- What's not so good?

Knowing that at least one-third of global food gets lost or wasted:

- (1) Name two examples of unnecessary food waste you've seen.
- (2) Suggest one way more people could decrease food waste.





**When there are so many varieties
of corn in the world, why does all
of ours look like this?!**

TRUE OR FALSE?

THEN COMMENT ON THIS IF YOU CAN:

“Millions of people on the planet are chronically hungry, so the world needs to produce more food.”

A century ago in many countries, more than 50% of the population were farmers. But today in North America, less than 2% of people are farmers and ranchers.

IS THIS 'GOOD' OR 'BAD' ?

GENERATE AT LEAST ONE ARGUMENT FOR EACH.



HIGH STEAKS

WHY AND HOW TO
EAT LESS MEAT



Eleanor Boyle

MOBILIZE *FOOD!*



Wartime Inspiration for
Environmental Victory Today

ELEANOR BOYLE
FOREWORD BY TIM LANG

OBJECTIVES FOR TODAY:

- Teach, learn, share experiences
- Imagine exercises, class sessions, units
- What kinds of issues — controversial (e.g. meat), or uncontroversial but still challenging (e.g. food waste)?
- Objectives for students — understanding, skills?
- Weigh options for student projects, e.g. research, volunteer work, interviews

FOOD SYSTEMS TODAY:

- Industrialized
- Globalized
- Livestock-centred
- Wasteful
- Centralized

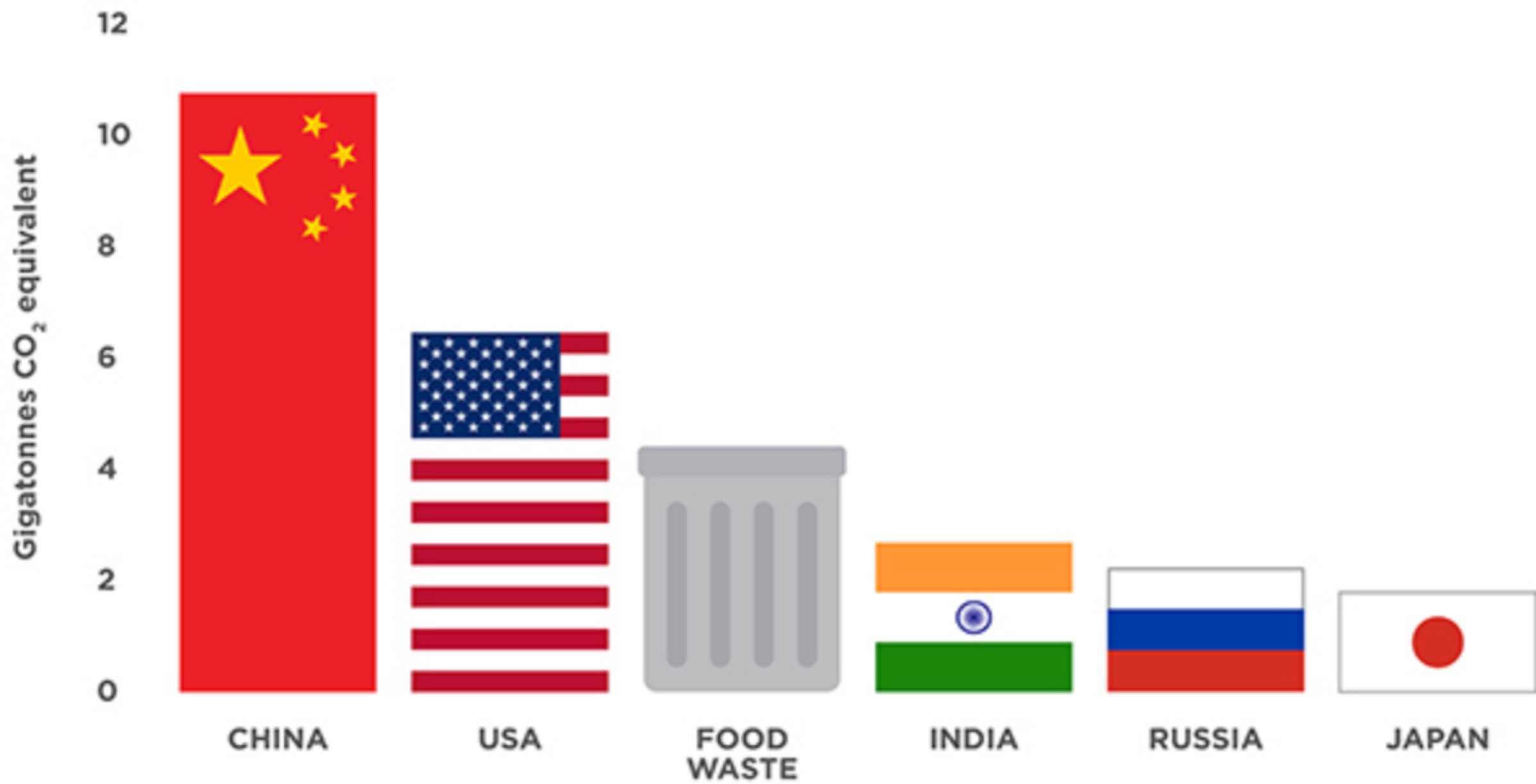


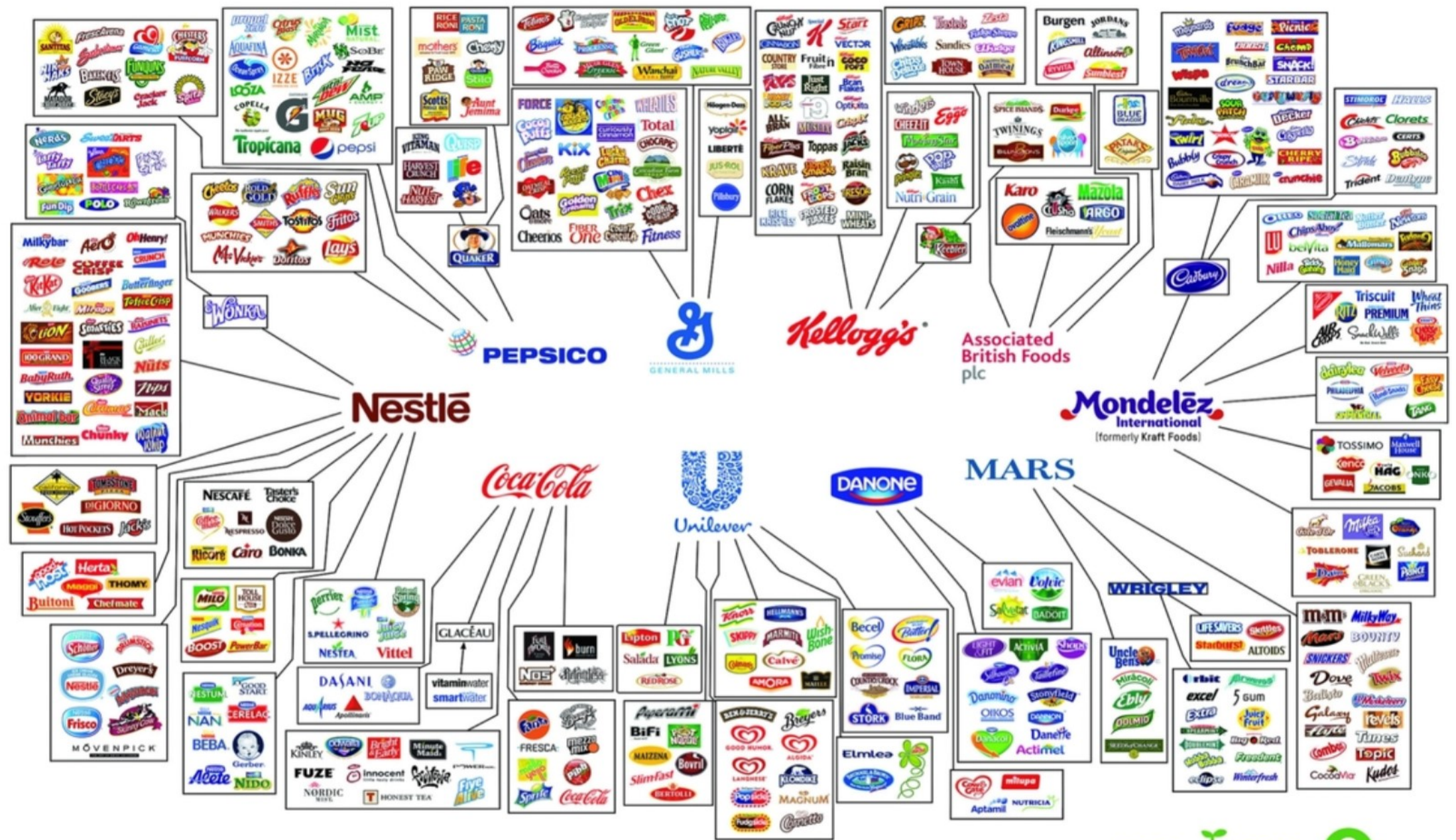




Cattle farming, shown here in northern Brazil, is emission-intensive and often accompanies large-scale deforestation. Credit: Yasuyoshi Chiba/AFP/Getty







CHALLENGES IN FOOD SYSTEMS TODAY:

- Plenty of food, but hunger
- Greenhouse gases and pollution
- Modern diets undermine health
- Inequality and injustice



Nature Food 2, 198–209 (2021)

Article published: 08 March 2021 [nature.com/articles/s43016-021-00225-9](https://www.nature.com/articles/s43016-021-00225-9)

Food Systems are Responsible for a Third of Global Anthropogenic Greenhouse Gas Emissions

M. Crippa, E. Solazzo, D. Guizzardi, F. Monforti-Ferrario, F. N. Tubiello, and A. Leip

'SUSTAINABLE DIETS':

- Less food waste
- More plant-based
- More local
- More organic
- Less processed
- Less packaging

RESPONSES / ACTIVISM / POLICY



DIET CHANGE
NOT
CLIMATE CHANGE

EN
MEDIC

Energy Health
Medical Center

Grosvenor SM

ALL BEING
SSIL
ALS



City of Vancouver unanimously passes motion to shift 20% of animal-based purchasing to plant-based, citing VHS report

📅 NOVEMBER 3, 2021

VHS recently launched a new report, “Increasing Plant-Based Purchasing at the Municipal Level”, which examines food purchasing for the City of Vancouver. The report reviews...

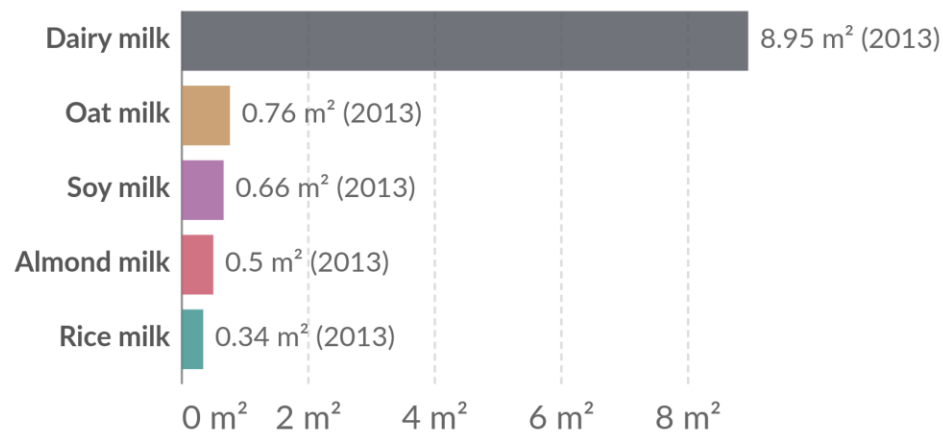
A FEW POTENTIAL EXERCISES

- Read a **Nutrition Facts label** on a package of potato chips
- Examine **grocery store flyers** to see what's most prominently advertised: How does that align with scientific goals for 'Sustainable Diets'?
- Compare the previous version of **Canada's Food Guide** (2007) to the latest version (released in 2019). How many changes can you identify?
- Look at **graphs showing emissions per unit of protein** (see <https://ourworldindata.org/grapher/ghg-per-protein-pooore>): What do they show about different protein sources?
- For more ideas, search *FOOD* at **ourworldindata.org**

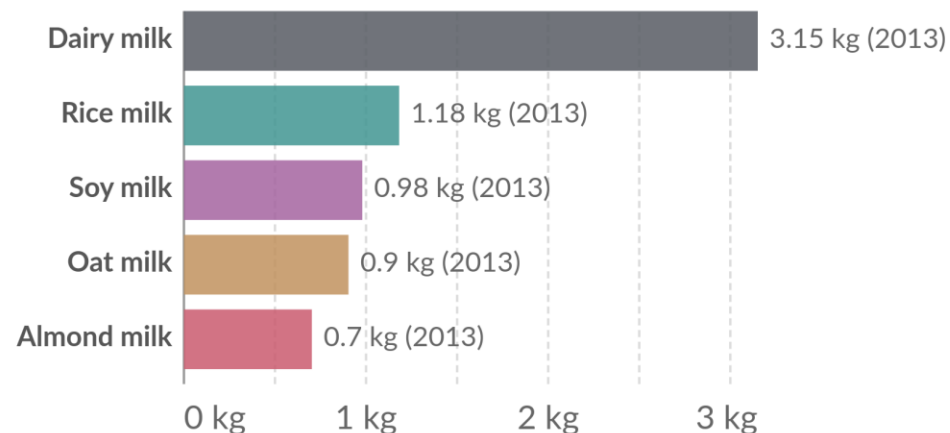
Environmental footprints of dairy and plant-based milks

Impacts are measured per liter of milk. These are based on a meta-analysis of food system impact studies across the supply chain which includes land use change, on-farm production, processing, transport, and packaging.

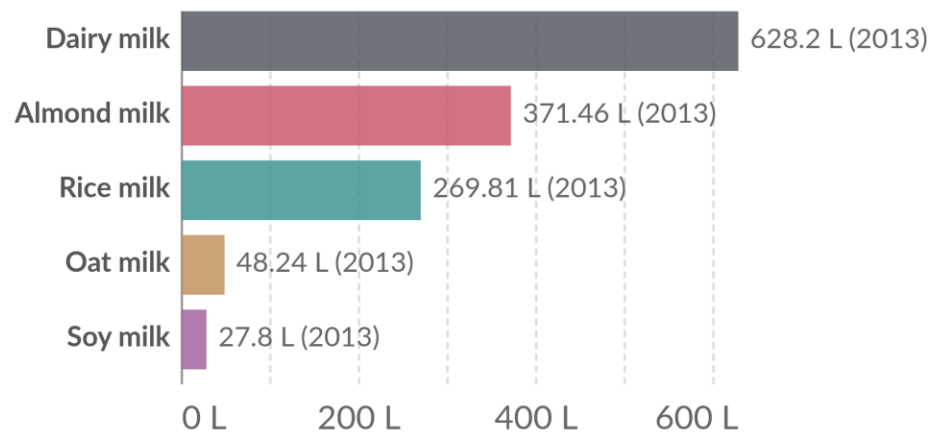
Land use



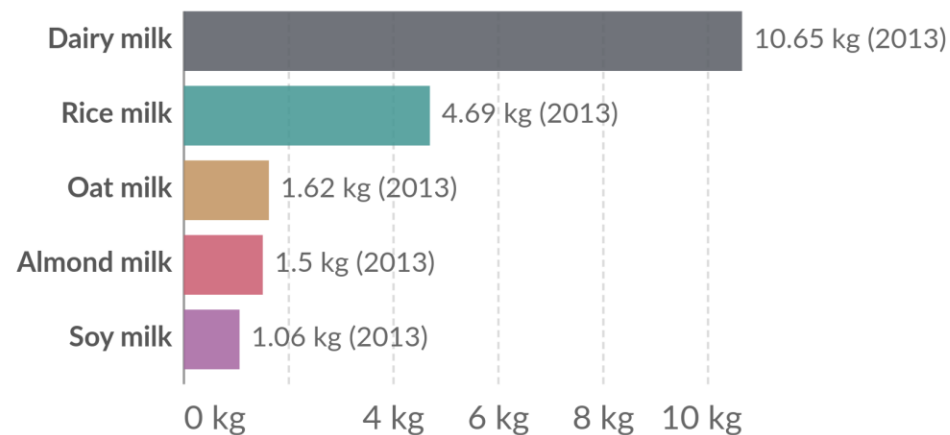
Greenhouse gas emissions



Freshwater use



Eutrophication



THINK OUTSIDE THE BAG!



PRINGLES

SALT & VINEGAR
FLAVOUR



Pringles Chips are
100% Potatoes

See bottom of can
for best before date.

156 g

NUTRITION LABELS: PRINGLES!

(1) Under 'Nutrition Facts,' look at calories.

- Are there 260 calories in this can?
- What % of the can will give you 260 calories?
- How many calories will you get if you eat the whole can (Okay, not the can itself, just the chips inside!)?

(2) Sodium / salt.

- What does 17% mean?
- If you eat all the chips in the can, what % of your daily recommended salt intake will you get?

(3) Is salt bad for you?

ADVERTISING FLYERS FROM BIG FOOD STORES

Students could do basic analyses of the flyers:

- What types of foods are advertised most?
- What % of ads are processed or junk foods?
- What % of ads are for meat or dairy?

CANADA FOOD GUIDE:

Compare the previous version (2007)
to the updated version (2019).

What differences can you identify?

Canada Food Guide

Have plenty of
vegetables and fruits

Eat protein foods

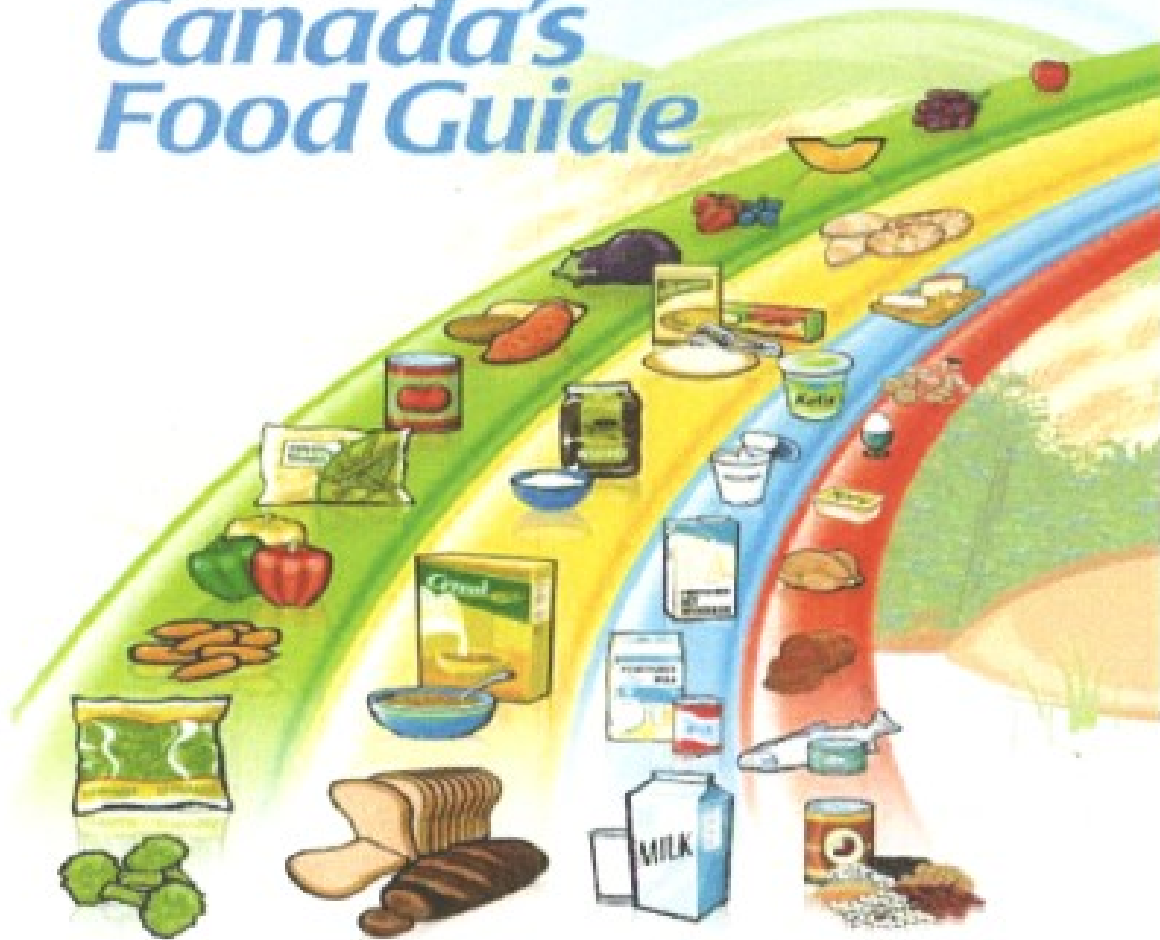
Make water
your drink
of choice

Choose
whole grain
foods



2007

Eating
Well with
**Canada's
Food Guide**



FRUITS
AND
VEGETABLES

GRAIN
PRODUCTS

MILK
AND
MILK
PRODUCTS

MEAT
AND
ALTERNATIVES

Have plenty of
vegetables and fruits

Eat protein foods

Make water
your drink
of choice



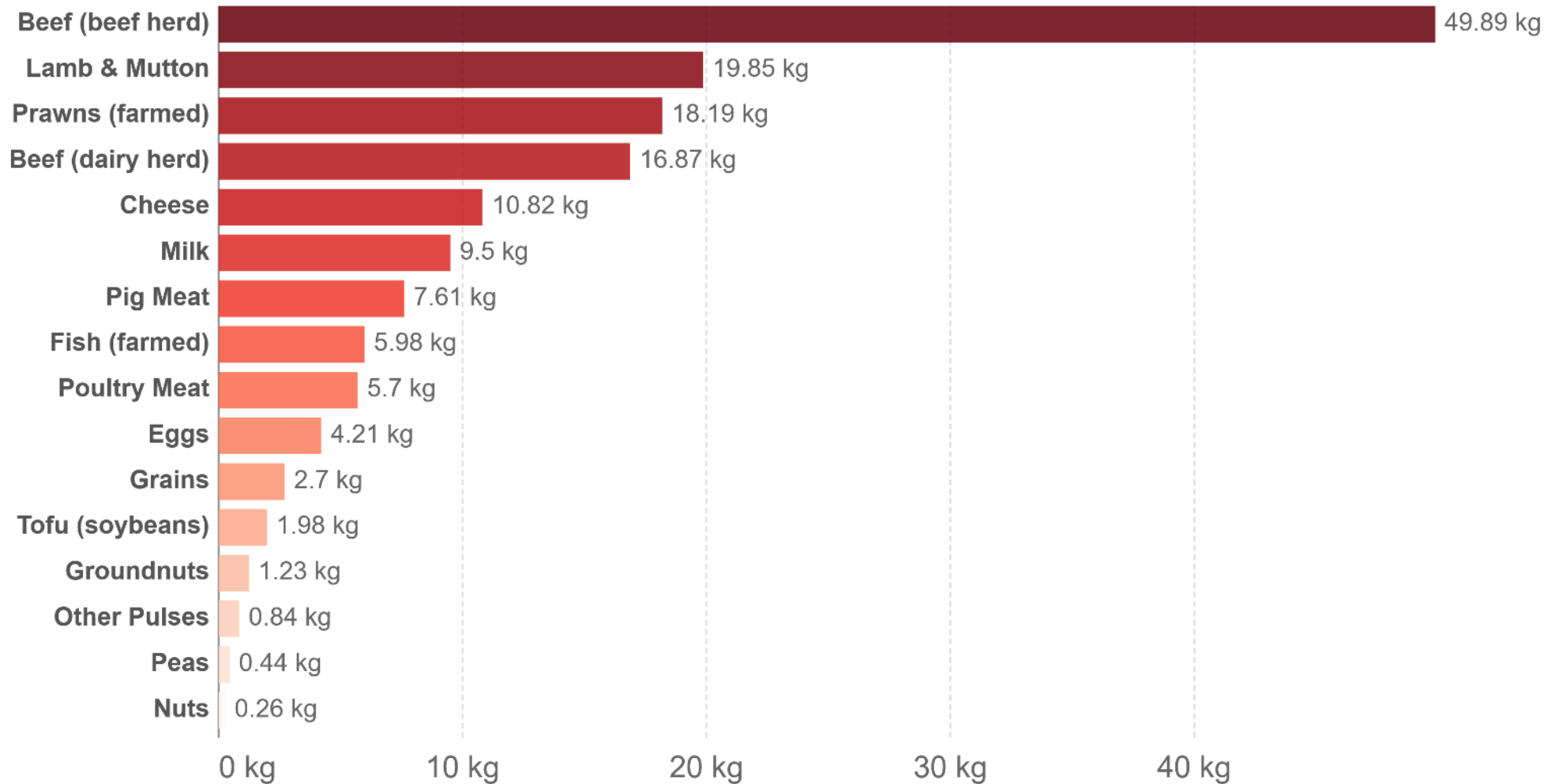
Choose
whole grain
foods

GRAPHS ABOUT FOOD AND EMISSIONS:

What do these tell us?

Greenhouse gas emissions per 100 grams of protein

Greenhouse gas emissions are measured in kilograms of carbon dioxide equivalents (kgCO₂eq) per 100 grams of protein. This means non-CO₂ greenhouse gases are included and weighted by their relative warming impact.



Source: Poore, J., & Nemecek, T. (2018). Additional calculations by Our World in Data.

Note: Data represents the global average greenhouse gas emissions of food products based on a large meta-analysis of food production covering 38,700 commercially viable farms in 119 countries.

OurWorldInData.org/environmental-impacts-of-food • CC BY

ACTIVITY / PROJECT: CONDUCT INTERVIEWS

Guidelines: Respect, anonymity, empathy

- Possible interviewees:

- **Elders > 80 years**

- Today, we waste more food than when you were young. What have you noticed?
 - Do you have suggestions as to how we might minimize food waste?

- **People who eat plant-based or vegan diets**

- Reasons, challenges

- **Chefs or cafeteria/restaurant managers**

- Possibilities for making food-service more sustainable



RESOURCES FOR POTENTIAL LESSONS OR UNITS ON FOOD

(1) foodspan.org

Johns Hopkins University Center for a Livable Future (a food think-tank) has a free, downloadable curriculum to introduce high-school students to food systems and their challenges. This resource is American.

(2) bethechangeearthalliance.org

Be the Change Earth Alliance has an Action Guide that can help students set personal environmental goals and keep track of their progress. They also offer workshops to schools. This resource is Canadian.



TURNING TOWARD SUSTAINABILITY

What kind of agriculture should we strive toward, and how will we get there?

[MORE](#)[ABOUT](#)[GETTING STARTED](#)[LESSON PLANS](#)[JOIN OUR LISTSERV](#)[CONTACT US](#)

FoodSpan

This free, downloadable curriculum provides high school students with a deep understanding of critical food system issues, empowers them to make healthy and responsible food choices, and encourages them to become advocates for



1. Crops: Growing Problems

How are crops grown industrially?

2. Animals: Field to Factory

How are meat, milk, and eggs produced industrially?

3. Seafood: Wild and Farmed

Where does our seafood come from?

4. The Hands That Feed Us

Who harvests, processes, serves, and sells our food?

5. Our Changing Climate

How is agriculture connected to climate change?

6. Turning Toward Sustainability

How are some people making their farms more sustainable?

9

8

7






BE THE CHANGE ACTION GUIDE



A GLOBAL MINDSHIFT HAPPENS
ONE **CHOICE** AT A TIME



EXAMPLES OF FOOD-RELATED GOALS FROM THE GUIDE

ACTIONS	The Basics			
A.9.1	I will get a vegetarian cookbook and try out ____ new meat free recipe(s) this week.			
A.9.2	I will learn more about eating healthy with less or no meat through www.earthsave.ca or another organization in my area.			
A.9.3	I will substitute poultry for beef. 			
A.9.4	I will have a vegetarian meal instead of eating poultry.  			
A.9.5	I will have a vegetarian meal instead of eating meat.  			
A.9.6	I will order a vegetarian meal next time I dine at a restaurant.			

EXAMPLES OF FOOD-RELATED GOALS FROM THE GUIDE

INTENTION 9 **EAT LESS MEAT**

		PLEDGE	# TIMES	# TIMES
A.9.11	I will learn about vegan nutrition and try a vegan diet (no animal or animal bi-products) for ___ days.			
A.9.12	I commit to doing action #(s) ____ consistently for ____ days/weeks/months.			
ACTIONS	Educating and Influencing Others			
A.9.13	At my school or work cafeteria, I will suggest they offer a vegetarian option for each meal.			
A.9.14	At my school or work cafeteria, I will suggest that we have one day a week that is meatless like “Meatless Mondays.”			

MOBILIZE FOOD!



Wartime Inspiration for
Environmental Victory Today

ELEANOR BOYLE
FOREWORD BY TIM LANG

Eleanor Boyle

PhD Neuroscience

MSc Food Policy

www.eleanorboyle.com

eleanor@eleanorboyle.com

604.230.2561