Making the Case for Climate-Friendly School Food Service

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Friends of the Earth, Food & Technology Program

Greening School Food: A Northwest Forum on Healthy, Climate-Friendly Food Service

September 25th, Troutdale, OR

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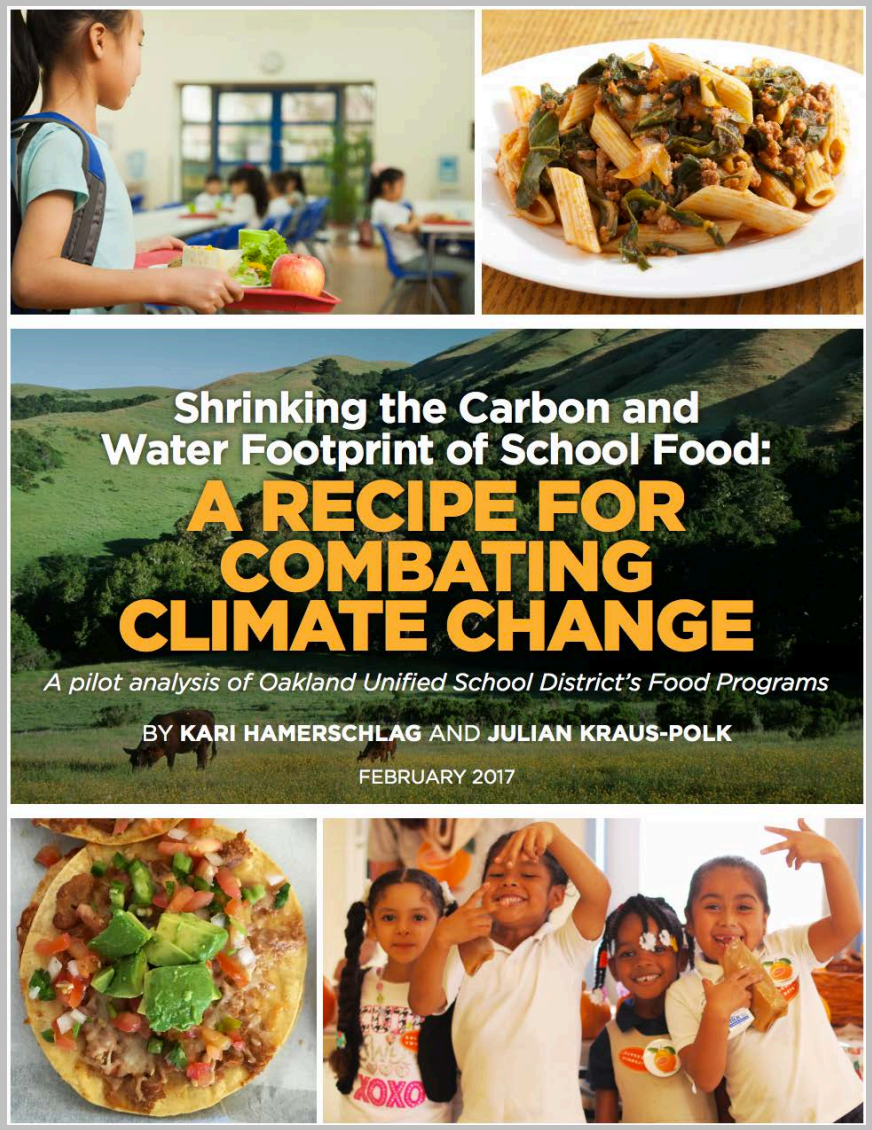

"Food service directors face complex demands and requirements, and serving kids tasty and nutritious food is and must remain their number one priority. The OUSD case study shows that plant-forward menu planning is feasible and can support the mandate for **healthier and more delicious food."**

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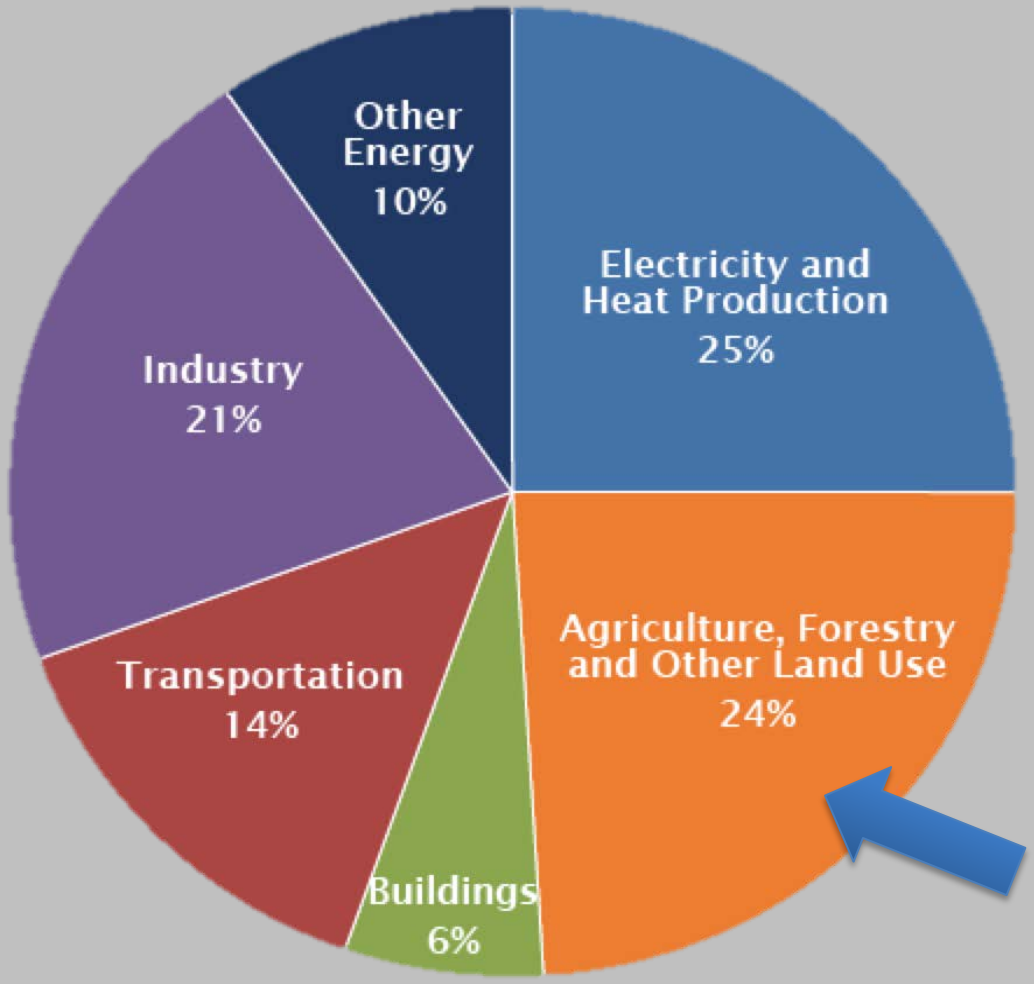
Food & Climate Change



Source: (EPA) https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data

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Livestock production accounts for

14.5 percent of global GHG emissions

more than the entire **transport sector combined!**

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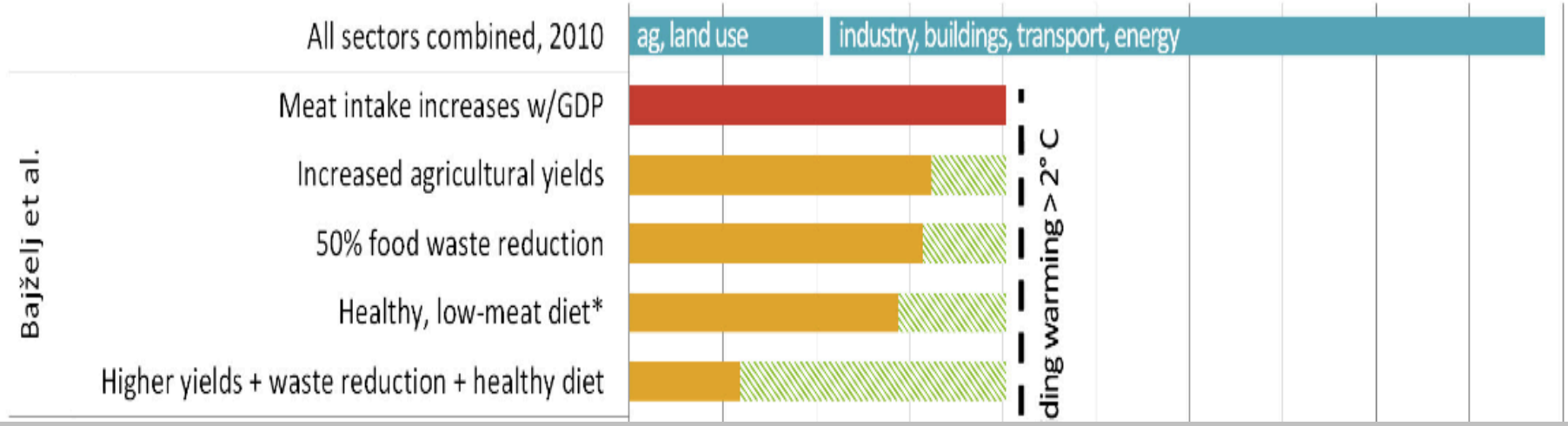
We cant avert the worst impacts of climate change without meat & food waste reduction

Figure 2: 2050 agriculture-related emissions scenarios



Note: the black dotted line represents the emissions threshold (21□3Gt CO2e) for at least a 66% chance of keeping global warming below 2 degrees C; the blue bar shows emissions from all sectors (49 Gt)

*The “healthy diet” limits intake of red meat (max of two 3 oz. portions (e.g. 2 burgers per week), poultry (max of one 85 g / 3 oz. portion per day), dairy, eggs, sugars, and oils to levels recommended by health organizations (e.g., WHO, FAO, American Heart Association, Harvard Medical School), and sets a minimum for fruit and vegetable intake.

Source: Center for Livable Future, 2015 and Bajzelj et al, 201

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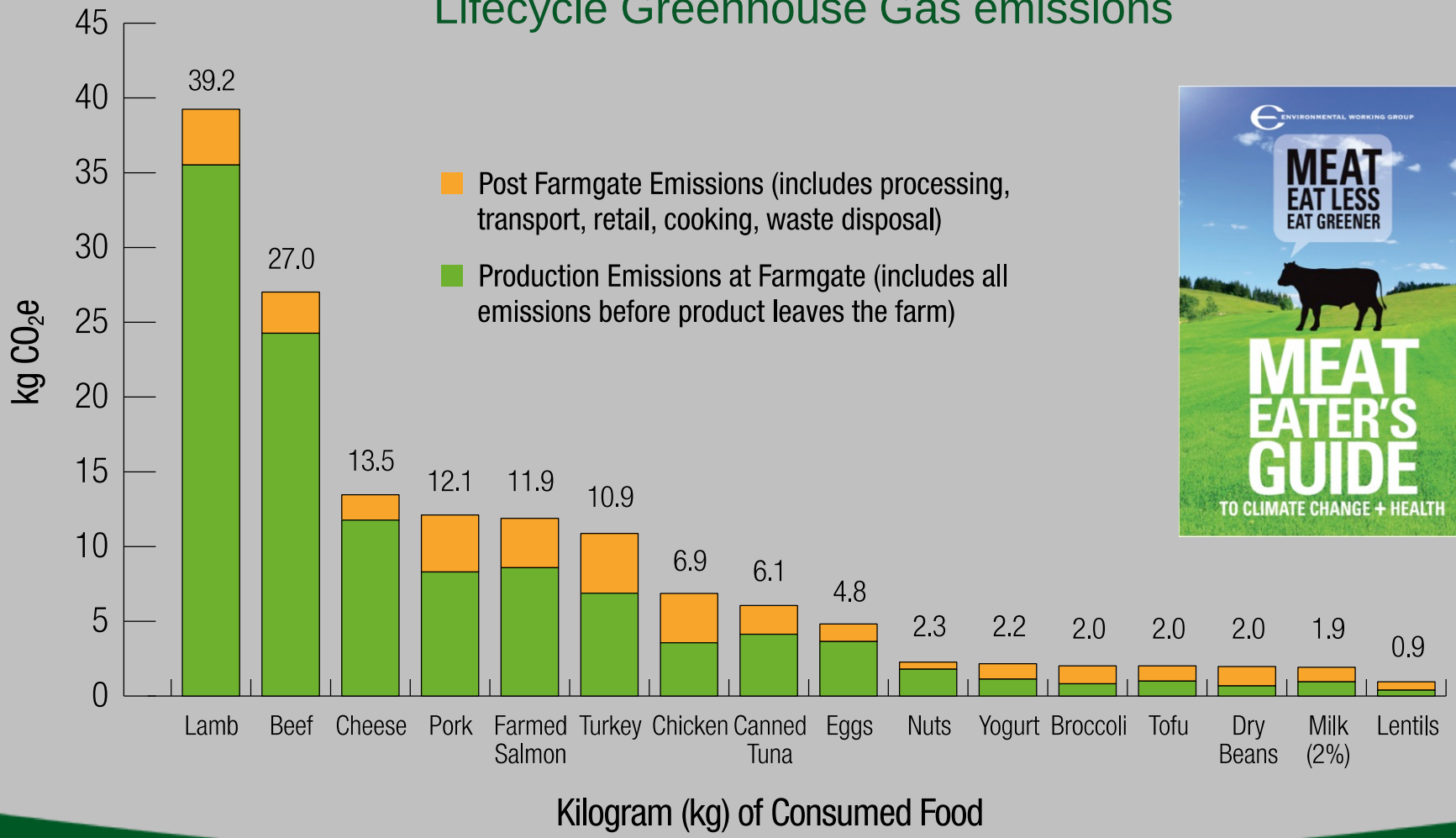
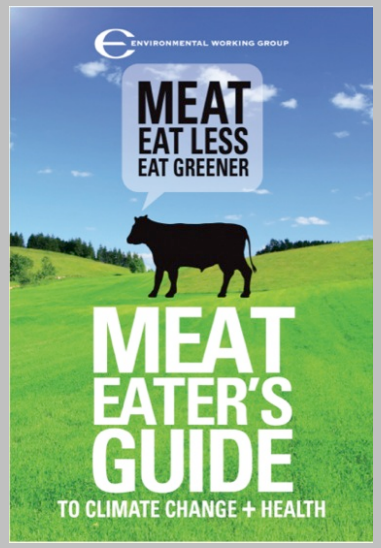
All Protein is Not Created Equal

Lifecycle Greenhouse Gas emissions





Source: Environmental Working Group

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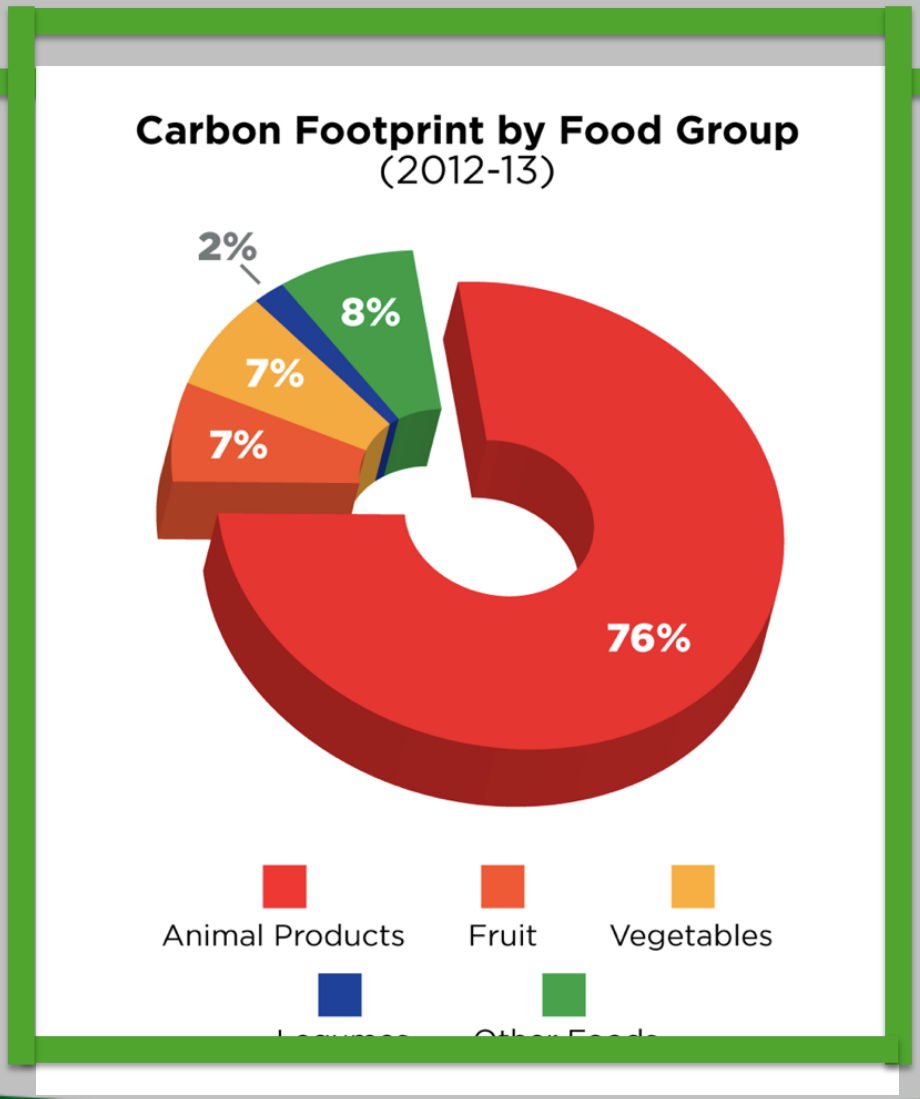
Animal Products Dominate OUSD's Footprint



Source: Friends of the Earth, Shrinking the Carbon and Water Footprint of School Food, 2017

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Cows and Methane Emissions

Methane is **30 times** more potent than CO_2

6-10 pounds of feed per pound of meat.

Beef accounts for 36% of U.S. diet related emissions

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Animal Feed, Destructive Impacts

50% of U.S. grain production feeds animals
149 mil. acres
17 bil. lbs of nitrogen fertilizer
167 mil. lbs of pesticides

- **Air and water pollution**
- **Depletes soil & water resources**
- **Accelerates climate change**
- **Destroys biodiversity, habitat, pollinators**
- **Health impacts from pesticides, antibiotics**

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Methane Emissions & Water Pollution

U.S. factory farms produce more than 500 million tons of manure every year, **3x the waste produced by humans**.

All the waste in Iowa from animals is more than the waste generate by every human in US and Canada combined

Manure pits generates nitrous oxide & methane, a greenhouse gas that is 30 times as potent—as CO2—. It also can leach harmful pollutants—such as antibiotics, metals and nitrogen and phosphorous directly into ground and surface water.

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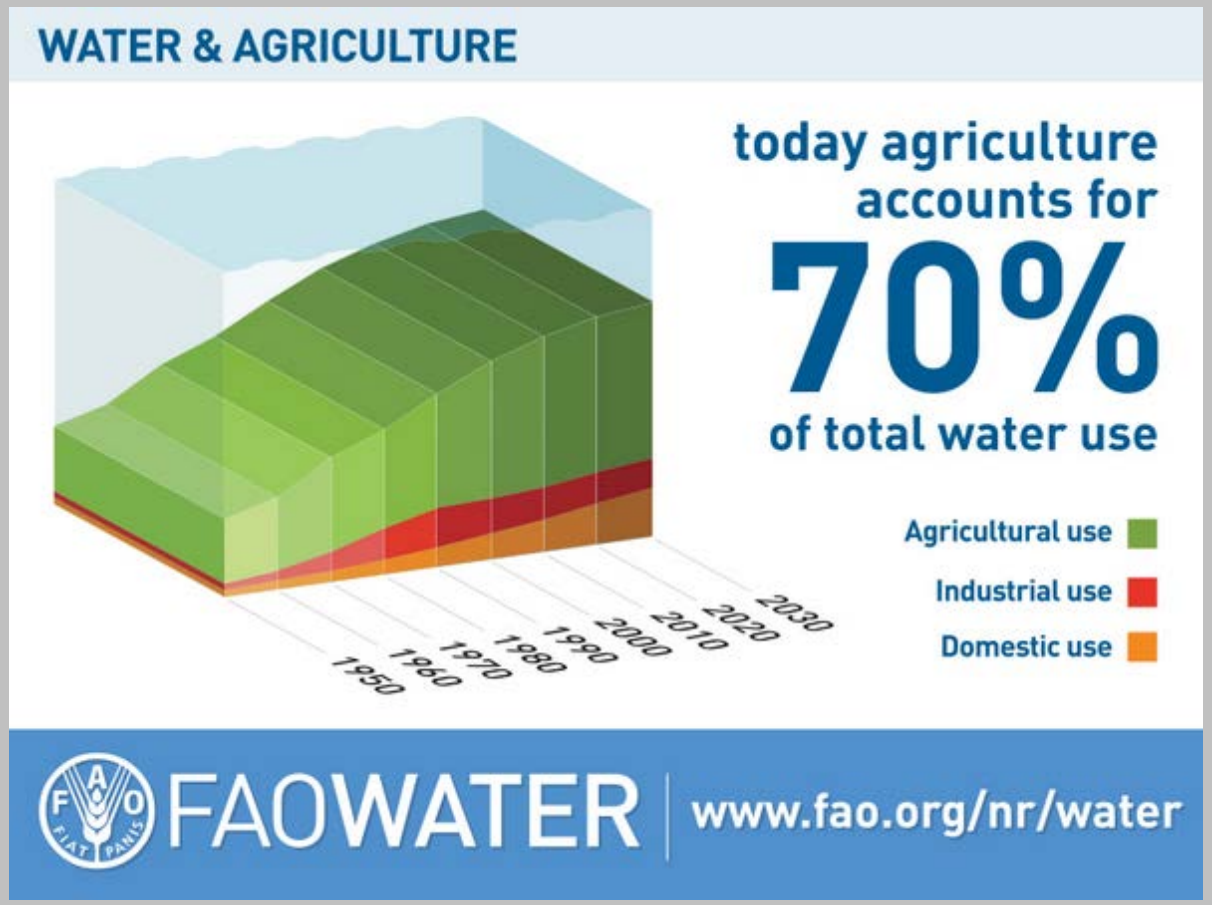
Food's Water Footprint



¼ of global fresh water is used for animal feed production

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Gallons of Water Per 4oz Serving

Source for all water figures: Mekonnen, M.M. and Hoekstra, A.Y. (2010) The green, blue and grey water footprint of crops and derived crop products, Value of Water Research Report Series No. 47, UNESCO-IHE, Delft, the Netherlands

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2017 Project Drawdown

most powerful strategies for reversing climate change

8 of the top 20 solutions are in Food

#3 Reduced Food Waste

#4 Plant-Rich Diet

RANK	SOLUTION	SECTOR	REDUCED CO2
1	Refrigerant Management	Materials	89.74 GT
2	Wind Turbines (Onshore)	Energy	84.60 GT
3	**Reduced Food Waste**	Food	70.53 GT
4	**Plant-Rich Diet**	Food	66.11 GT
5	Tropical Forests	Land Use	61.23 GT
6	Educating Girls	Women and Girls	59.60 GT
7	Family Planning	Women and Girls	59.60 GT
8	Solar Farms	Energy	36.90 GT
9	**Silvopasture**	Food	31.19 GT
10	Rooftop Solar	Energy	24.60 GT
11	**Regenerative Agriculture**	Food	23.15 GT
12	Temperate Forest	Land Use	22.61 GT
13	Peatlands	Land Use	21.57 GT
14	**Tropical Staple Tree Crops**	Food	20.19 GT
15	Afforestation	Land Use	18.06 GT
16	**Conservation Agriculture**	Food	17.35 GT
17	**Tree Intercropping**	Food	17.20 GT
18	Geothermal	Energy	16.60 GT
19	**Managed Grazing**	Food	16.34 GT
20	Nuclear	Energy	16.09 GT

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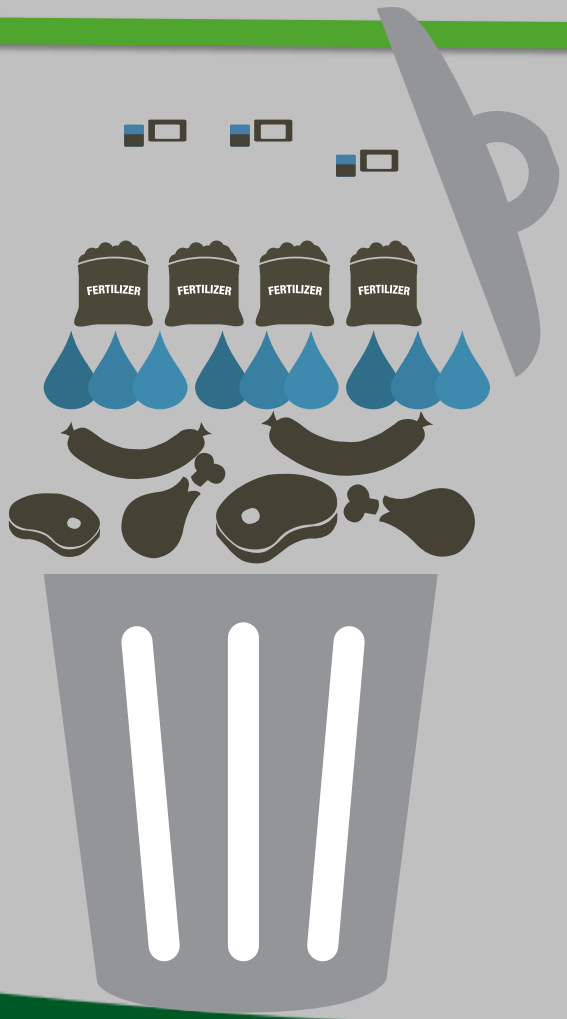
Food Waste = Wasted Water, Energy, Fertilizer, Pesticides and other resources



Resource-intensive animal foods account for 1/3 of GHG emissions from food waste so reducing food waste from animal products through purchasing less, ordering less, putting less on the plate, is really important.

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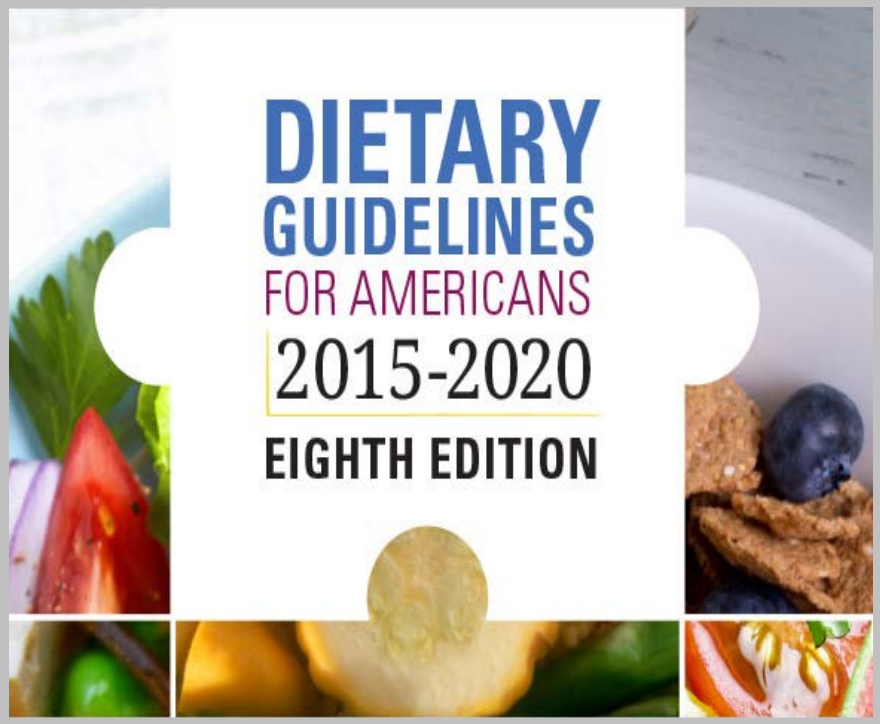
2015-2020 US Dietary Guidelines Conclusions and Recommendations



- Average intake of meat poultry, eggs is **too high** for teenage boys and adult men
- Legumes are under consumed across all age categories. These are lean, nutrient dense protein which DGA recommends.
- Vegetarian and (lower meat) Mediterranean diets are considered as two of five healthy eating patterns described by guidelines

"lower intakes of meat as well as processed meats and poultry are associated with reduced risk of cardio vascular disease in adults".

"these dietary patterns are associated with reduced risk of obesity, type 2 diabetes and some types of cancer"

Source: https://health.gov/dietaryguidelines/2015/guidelines/

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Scientific Report of the 2015-20 US Dietary Guidelines Advisory Committee

"consistent evidence indicates that, in general, a dietary pattern that is higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in animal-based foods is more health promoting and is associated with lesser environmental impact (GHG emissions and energy, land, and water use) than is the current average U.S. diet."

https://health.gov/dietaryguidelines/2015-scientific-report/02-executive-summary.asp

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MENUS of CHANGE®
The Business of Healthy, Sustainable, Delicious Food Choices

AMERICANS EAT

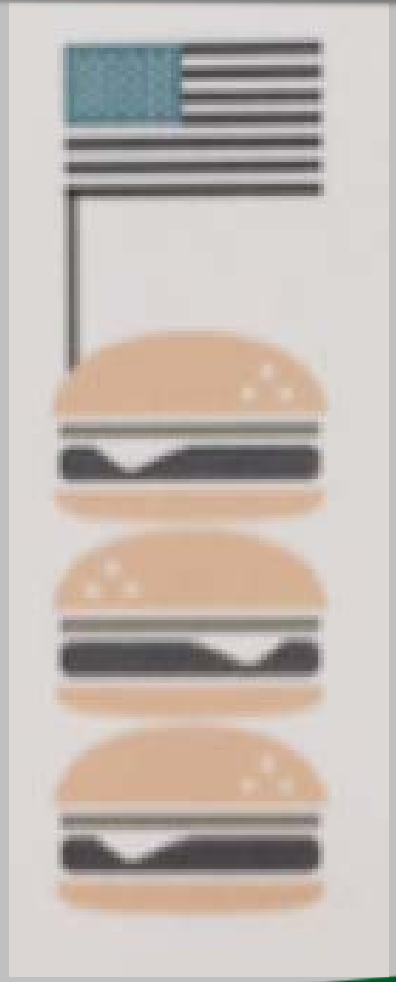
3X AS MUCH MEAT

(RED MEAT AND POULTRY) AS THE

GLOBAL AVERAGE.

OVER HALF

IS RED MEAT.



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MENUS of CHANGE®

The Business of Healthy, Sustainable, Delicious Food Choices

"Greater emphasis on plant-based foods, including plant based proteins is the single most important contribution the food service industry can make toward environmental sustainability"

Culinary Institute of America and Harvard's School of Public Health

Menus of Change 2016 Report

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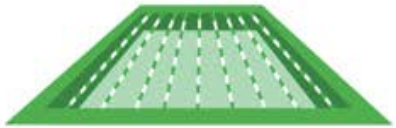
FOOD SHIFTS MATTER

Over 2 years, Oakland Unified School District reshaped its menu with fewer animal foods and more protein-rich legumes and vegetables. This shift generated considerable **water** and **climate benefits**, and **cost savings**:

SAVED 42million GALLONS OF WATER



63 OLYMPIC SIZED SWIMMING POOL

14% REDUCTION IN THE CARBON FOOTPRINT OF ITS ENTIRE FOOD PURCHASES

15,000 TREES PLANTED

1.5million FEWER MILES DRIVEN

87 SOLAR SYSTEMS INSTALLED ON THE SCHOOL DISTRICTS' ROOVES

COST SAVINGS

$42,000

What if all school districts followed Oakland's lead?

If every California K-12 school food service took similar action, it would amount to reducing roughly 80 million kg of CO_2 emissions, equivalent to eliminating the emissions from 17,000 cars that drive almost 200 million miles per year, or installing 11,000 residential solar systems

If every school district in the nation took similar action, the GHG reductions would be akin to driving nearly 1.6 billion fewer miles or taking 150,000 cars off the road every year or installing 99,000 residential solar systems

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Presenter Contact Information:

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