

Sustainability and your Food Choices

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Things seem bleak



The daily beast



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But hey we are gardeners...

- Optimists
- Nurturers
- Problem solvers

Every seed we plant is an act of faith.



Leslie Davis – Seed2Need



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What can we do?



The choices we make about the food we eat have a big impact on:

- our health
- our economy
- our food system
- and the environment



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Sustainable Diets

- UN initiative to improve health, food security, and environmental sustainability



<http://graham.umich.edu/news/sustainable-diet-menu>



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1. Reduce wasted food



Baytoday.ca

41% of food is never eaten (US)

Who wastes the most?

- Industry
- Supermarkets
- Restaurants
- Institutions
- Households

#1 in our landfills



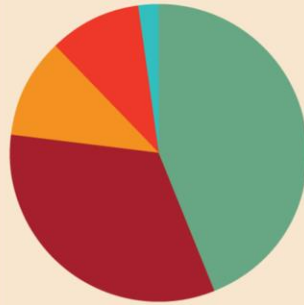
Civileats.org



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WHO'S WASTING THE MOST FOOD?

ANYWHERE FOOD IS GROWN, SOLD, OR EATEN, FOOD IS WASTED. HOWEVER CONSUMERS ARE DEFINITELY THE BIGGEST SOURCE OF FOOD WASTE



Residential
44%



Restaurants
33%



Grocery Stores
11%



Institutional
10%



Industrial
2%

Fix.com



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Wasted Food at Home

- 300 pounds per American is thrown out every year
- 30 to 50% of food bought in supermarkets is thrown away at home



Discovermagazine.com



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At home...

- Take an inventory of pantry, fridge, & freezer
- Make a food plan for the week
- Make a shopping list
- Stick to it...



Stopfoodwaste.org



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Store foods correctly

Resources for food safety and storage

- FDA
- NMSU Publications



Inspireuplift.com



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At home...

- Clean out the fridge and freezer regularly
- At least 1 leftovers day each week
- Freeze it...
vegetable scraps for
broth/soup stock



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At home....

Food scraps...

- Chickens
- Composting



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Supermarkets

- Consumers demand perfection
- Food labels not related to food safety -
 - Sell by – stocking purposes
 - Best by –recommended for best flavor & quality
 - Use by – no longer peak quality according to manufactures



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State & Local Ordinances...

- Allow food to be donated to food banks, food pantries, shelters...
- A 5% reduction in food waste is enough to feed 4 million people



Roadrunner Food Bank



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Waste to black gold

- Composting instead of dumping



Denver Urban Gardens



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2. Reduce red meat consumption

Industrial Ag/CAFOs

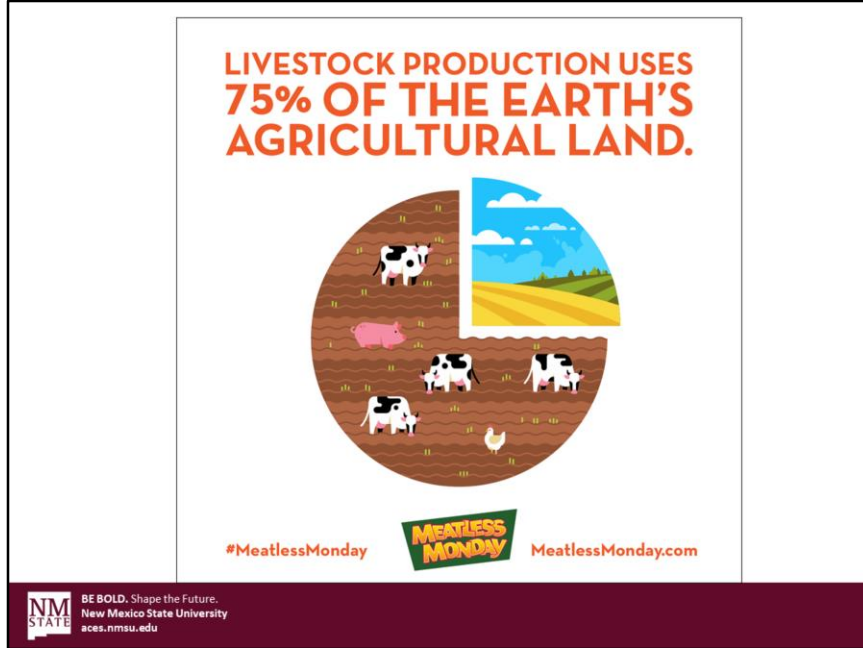
- 60% of cropland is used to feed livestock
- 40% of cropland used to feed people



Agriculture.com



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Reference: Foley, J. A., Ramankutty, N., Brauman, K. A., Cassidy, E. S., Gerber, J. S., Johnston, M., . . . Zaks, D. P. M. (2011). Solutions for a cultivated planet. *Nature*, 478, 337. doi:10.1038/nature10452
<https://www.nature.com/articles/nature10452>

How much do we eat?

- Average American eats 222 pounds of meat per year (USDA 2018)
- That's 4 times as much as the rest of the world



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https://www.huffpost.com/entry/eat-less-meat-environmental-effect_l_5d39d84fe4b020cd99501f2d?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAFZclrubUK55GHJpXxqoWiJNpadCUam2tMrKTEwvGPmS0BE_jcZpMJXlvhG6Tb7yS53nnaqPv39iXBoWQGjkTTR3_-o4P-6XsXZh3mfXJlwPypeO5eliFDCuInuqRRwRHluNODAUHrQ7EJ8Zt-AWpjcNTMBeK2_tLfeidI9GwL86

Environmental considerations

- 92% of fresh water is used for agriculture globally
- 1/3 of that is used to raise crops to feed livestock

(John Hopkins Center for a Livable Future)



Wikipedia



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Introduction to the U.S. Food System: Perspectives from Public Health Bob Lawrence, Keeve Nachman, Pamela Rhubart-Berg
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Water use

87% of fresh water used to produce animal feed (USA)

- 216 gallons/lb of soy
- 108 gallons/lb of corn



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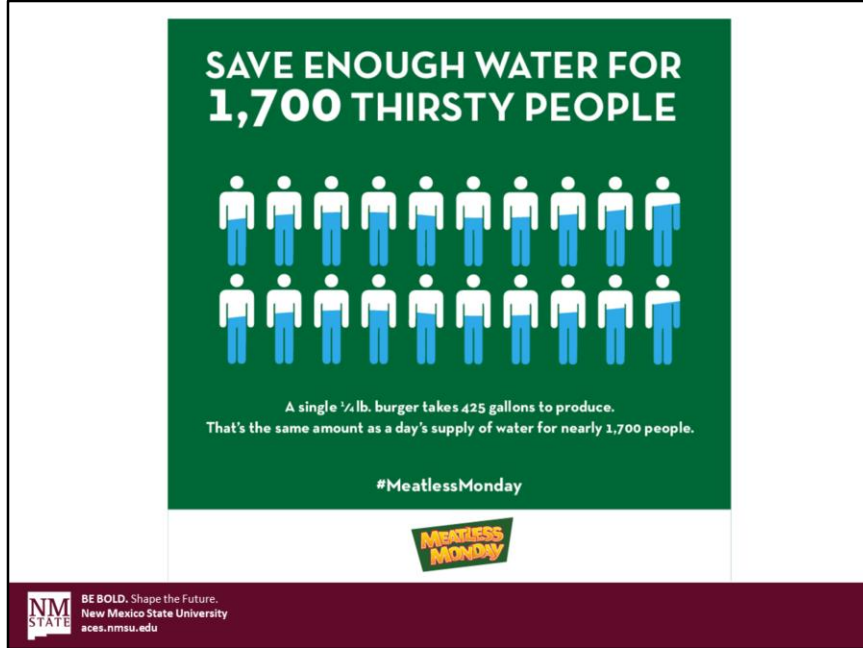
Introduction to the U.S. Food System: Perspectives from Public Health Bob Lawrence, Keeve Nachman, Pamela Rhubart-Berg
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<https://www.watercalculator.org/>

Food Item	Serving Size	Water Footprint
Steak (beef)	6 ounces	674 gallons
Hamburger	1 (includes bread, meat, lettuce, tomato)	660 gallons
Ham (pork)	3 ounces	135 gallons
Eggs	1 egg	52 gallons
Soda	17 ounces	46 gallons
Coffee	1 cup	34 gallons
Wine	1 glass	34 gallons
Salad	1 (includes tomato, lettuce, cucumbers)	21 gallons



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Fact: One ¼ lb. of beef requires 425 gallons of water to produce.

Reference:

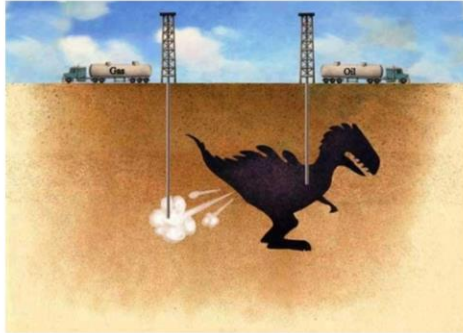
Mekonnen, M.M. and Hoekstra, A.Y. (2010) [The green, blue and grey water footprint of farm animals and animal products](#), Value of Water Research Report Series No. 48, UNESCO-IHE, Delft, the Netherlands

Equation: $0.25 \text{ lbs.} \times 1,700 \text{ gal} / 1 \text{ lb. beef} = 425 \text{ gallons (total water footprint)}$

Estimate: 32 ounces of water needed per person/per day. (Daily water needs vary individually. 32 ounces is lower than general recommendations for fluid intake, but should be enough to keep a person healthy for a day, especially since additional water is absorbed through food.) $6,800 \text{ cups} / 32 \text{ ounces} = 1,700 \text{ servings per person/per day}$

Energy Footprint

- One pound of Beef 35:1 (feedlot)
- One pound of Plants 3:1



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Greenhouse Gases

- 65% nitrous oxide - fertilizer
- 25% methane from enteric fermentation
 - 25% more potent than Carbon Dioxide
- Landfills #1 producer – all that rotting food



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What does that mean?

“If the average American cut just a quarter pound of beef a week from their diet, about one hamburger, it would be the equivalent of taking 10 million cars off the road for a year.”



Azcentral.com



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Huffington Post & Center for a Livable Future



Pledge to Go Meatless

PLEDGE to go meatless this Monday. Join the growing number of individuals, families and institutions pledging to improve their health and the health of our planet.

REGISTER your blog or website. We're always looking for people to collaborate with to advance our mission. We're happy to help you get the word out or give you a heads-up on upcoming content.

I pledge to go Meatless on Mondays

Name *

First

Last

Email Address *

Get the Newsletter

Sign me up for Meatless Monday's weekly newsletter

<https://www.meatlessmonday.com/pledge-to-go-meatless/>



3. Buy Local & Direct

- Support local families
- Keeps farmers on the land
- Keeps money in your community



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Food Transport

- 10% of food related emissions

































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Activity: Calculate Your Food Miles

Cooperative Extension Service 

What is your food mileage? Circle ingredients for your main dish, sides, and flavorings from this table to make a nutritious and delicious meal. When you are finished turn over the worksheet and calculate your food miles.



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Local & direct

- Preserves genetic diversity
- Preserves open space
- Enhances ecosystems
 - Wildlife
 - Beneficial insects
 - Soil health
 - Native plants
 - Carbon sequestration



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Buy local & direct

- Support local flavor and food diversity



New Mexico Farmers Market Association



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Local & direct

- Tastes and looks better
- More nutritious - faster from harvest to your table
- Safe – you know where it came from and how it was grown



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Local & direct

- Social gathering place
- Master Gardener volunteer opportunities



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4. Grow your own

- Satisfaction
- Good food
- Build soils
- Create habitat
- Save money
- Share the bounty
- Teach moments



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Simple actions to reduce emissions from food miles

- Local diet save 1,000 miles
- Replace red meat with dairy, chicken, fish or eggs 1 day per week save 760 miles
- Eat vegetarian 1 day per week saves 1,160 miles



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Recap

1. Reduce wasted food
2. Reduce red meat consumption
3. Buy local and direct
4. Grow your own



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More information

- Introduction to the U.S. Food System: Perspectives from Public Health. Bob Lawrence, Keeve Nachman, Pamela Rhubart-Berg John Hopkins Center for a Livable Future <https://clf.jhsph.edu/>
- The Nutrition Source. Harvard School of Public Health www.hsph.harvard.edu/nutritionsource
- USDA Food and Nutrition Service <https://www.fns.usda.gov/>
- EPA Reducing Food Waste at home <https://www.epa.gov/recycle/reducing-wasted-food-home>



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Thank you



NMSU ACES photo archives



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